City of Arvada
City Council Agenda
MAY 5, 2026

Councilmembers:
Lauren Simpson, Mayor
Randy Moorman, Mayor Pro-Tem
Shawna Ambrose, District 2
Sharon Davis, At large
Bob Fifer, District 4
Michael P. Griffith, At large
Rebecka Lovisone, District 3

Staff Members Usually Present:
Don Wick, City Manager
Linda Haley, Deputy City Manager
Allison Scheck, Deputy City Manager
Rachel Morris, City Attorney
Jacqueline Rhoades, Director of Infrastructure
Jessica Garner, Director of Community & Econ. Dev.
Bryan Archer, Chief Financial Officer
Gabriella Bommer, Director of Human Resources
Ryan Stevenson, Director of Vibrant Community & Neighborhoods
Rachael Kuroiwa, Director of Communications & Engagement
Ed Brady, Chief of Police
Kristen Rush, City Clerk

Info: 720-898-7550

THIRD FLOOR CONFERENCE ROOM
EXECUTIVE SESSION (If Needed)
5:00 P.M.

REGULAR MEETING
CITY COUNCIL CHAMBERS
6:00 P.M.

1. Call to Order - 6:00 PM
2. Moment of Reflection and Pledge of Allegiance - Mayor Pro Tem Moorman
3. Roll Call of Councilmembers
4. Approval of Minutes - None
5. Recognitions and Communications
   - A. Proclamation for Provider Appreciation Day - Presented by Councilmember Ambrose
   - B. Proclamation for Poppy Month - Presented by Councilmember Davis
   - C. Proclamation for Mental Health Month - Presented by Councilmember Fifer
   - D. Proclamation for Economic Development Week - Presented by Councilmember Lovisone
   - E. Proclamation for Building Safety Month - Presented by Mayor Pro Tem Moorman
   - F. Proclamation for ALS Awareness Month - Presented by Councilmember Ambrose
   - G. Proclamation for Drinking Water Week - Presented by Councilmember Davis
   - H. Proclamation for Affordable Housing Month - Presented by Councilmember Fifer
6. Presentations
   - A. Arts & Culture Commission Presentation (Presenters: Adelle Burton and Arts & Culture Commission members Kimberly Wagner and Tory Fink)
7. Public Comment on Issues not Scheduled on Agenda - Three Minute Limit
8. New Business

A. Consent Agenda

1. R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00

2. R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation

B. Resolutions

1. R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency (Presenter: Brian Wilkerson, Emergency Manager)

2. R26-009, A Resolution Repealing the Current City Council Rules of Procedures Governing Meetings and Adopting City Council Bylaws **(TO BE POSTPONED INDEFINITELY)**

C. Ordinances (First Reading)

1. CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado, a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72 (Public Hearing to be set for June 16, 2026 at 6:15 P.M.)

9. Other

A. Motion to cancel June 2, 2026 City Council Business Meeting

10. Public Hearings - 6:15 PM

A. CB26-016, An Ordinance Repealing, Retitling, and Reenacting Chapter 94, Article II, Construction and Repair of Sidewalks, etc., of the Arvada City Code (Ordinance No. 4932) (Presenter: Chris Lisberg, Assistant City Engineer)

11. Public Comment - Five Minute Limit

12. Reports from City Council

A. Council Committee Reports

13. Reports from City Manager

A. Review of Future Workshops and Presentations

14. Reports from City Attorney

15. Adjournment

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.A.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Provider Appreciation Day - Presented by Councilmember Ambrose

Report in Brief

City Council will proclaim May 8, 2026, as Provider Appreciation Day.

Each organization will receive a proclamation, represented by:
Lisa Jansen Thompson, Executive Director of the Early Childhood Partnership of Adams County
Julia Brink: Director of Workforce Development for Triad Early Childhood Council.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/09/2026
Megan McCall, Assistant City Attorney II	04/09/2026

Approved by:

Rachel Morris, City Attorney	04/14/2026
Linda Haley, Deputy City Manager	04/14/2026
Don Wick, City Manager	04/14/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, the Early Childhood Partnership of Adams County and the Triad Early Childhood Council, and other organizations nationwide are recognizing Early Care and Education Providers on this day; and

WHEREAS, the early care and education system supports children's growth, development, and educational advancement while creating positive economic impacts for families and communities; and

WHEREAS, early care and education providers are essential to the health of our communities by fostering safe and welcoming spaces, supporting working families, and creating enriching environments where children develop lifelong skills; and

WHEREAS, early care and education providers work in various settings, including centers, family childcare homes, and preschools, offering families a choice in the type of care that works best for them and their child; and the City of Arvada recognizes that child care has been and continues to be a lifeline for families, communities, and the economy and is often under-resourced and under-valued; and

WHEREAS, support for affordable, accessible high-quality early care and education represents a worthy commitment to help families work, support children's healthy development and learning, and keep our economy growing.

NOW, THEREFORE, BE IT PROCLAIMED by the Mayor and the Arvada City Council that May 8, 2026, be designated as Provider Appreciation Day in Arvada and urge all citizens to recognize early care and education providers for their important work, and how valuable they are to our communities.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.B.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Poppy Month - Presented by Councilmember Davis

Report in Brief

City Council will proclaim May, 2026 as Poppy Month in Arvada.

The poppy flower adorned the battlefields of Flanders Field in France during World War I, and was looked upon by those serving as a living symbol of their fallen comrades' sacrifices. In 1920, after World War I, the poppy became the official flower of The American Legion Family to memorialize the soldiers who fought and died during the war, and distribution of poppies became a Legion national program in 1924. To this day, thanks in large part to the American Legion Auxiliary, the poppy is nationally recognized and worn as a symbol of sacrifice made by the men and women who served and died for their country during a time of war.

Members of the American Legion Auxiliary Wilmore-Richter Unit 161 will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/09/2026
Megan McCall, Assistant City Attorney II	04/09/2026

Approved by:

Rachel Morris, City Attorney	04/14/2026
Linda Haley, Deputy City Manager	04/14/2026
Don Wick, City Manager	04/14/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, the sacrifices of those who have lost their lives, their health, or their livelihood as a result of their military service are rightly the concern of all citizens; and

WHEREAS, the annual sale of poppies by the American Legion Auxiliary Unit 161 offers an opportunity for the people of this community to express their solicitude for those unfortunate persons who have paid more than their share of the cost of freedom; and

WHEREAS, the proceeds of this worthy fund-raising campaign are used exclusively for the benefit of disabled and needy veterans, and the widows and orphans of deceased veterans, in the desire to "Honor the Dead by Helping the Living".

NOW, THEREFORE, BE IT PROCLAIMED by the Mayor and City Council of the City of Arvada, Colorado that the month of May, 2026 be designated:

Poppy Month in Arvada

Section 1. The Arvada City Council encourages all Arvada residents to participate in Poppy Month and to wear a poppy as mute evidence of our gratitude to the men and women of this country who have risked or lost their lives in fulfilling their obligations as American citizens.

Section 2. The Arvada City Council recognizes the merits of the American Legion Auxiliary Unit 161.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.C.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Mental Health Month - Presented by Councilmember Fifer

Report in Brief

City Council will proclaim May 2026 as Mental Health Month.

Olivia Lawson, Manager, Clinical Quality Improvement with Jefferson Center for Mental Health will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/09/2026
Megan McCall, Assistant City Attorney II	04/09/2026

Approved by:

Rachel Morris, City Attorney	04/14/2026
Linda Haley, Deputy City Manager	04/14/2026
Don Wick, City Manager	04/14/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, good mental health is essential to the overall health and emotional well-being of all children, youth, adults and families; and promotes a healthy community; and

WHEREAS, nearly one in four people in our communities experience a mental health condition each year and more than 17% of individuals in our communities experience substance use disorder each year including alcohol and drug use; and

WHEREAS, the lack of awareness of where to seek support, and stigma against mental health conditions and substance use disorders prevents many people from accessing care and when mental health problems and substance use disorders are detected early and treated, people can recover and maintain a healthy and independent life; and

WHEREAS, increased focus on the prevention of mental health conditions and substance use disorders among children, adolescents, and adults through screening and early intervention helps reduce suffering and improve lives; and

WHEREAS, it is imperative that all members of our community, irrespective of age, gender expression, sexual identification, race, culture, ethnic background, education, or economic status, have equitable access to essential care, support, and services for mental health and substance use conditions; and

WHEREAS, the City of Arvada is dedicated to improving the health and well-being of its citizens and employees by increasing awareness, ending stigma, and focusing on the integral role of mental health in all our lives.

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designates the month of May 2026 as Mental Health Month and call upon all citizens, government agencies, public and private institutions, businesses, and schools to recommit our communities and resources to increasing awareness and understanding of mental health, providing appropriate and accessible services for all citizens, and making mental health a priority.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.D.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Economic Development Week - Presented by Councilmember Lovisone

Report in Brief

City Council will proclaim the week of May 4-8, 2026 as Economic Development Week.

Members of the AEDA Board will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/13/2026
Megan McCall, Assistant City Attorney II	04/15/2026

Approved by:

Rachel Morris, City Attorney	04/18/2026
Linda Haley, Deputy City Manager	04/19/2026
Don Wick, City Manager	04/20/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, Economic Development Week was created by the International Economic Development Council in 2016 to increase awareness of local programs and services that create jobs, advance career development opportunities and increase quality of life among our communities, and

WHEREAS, economic development is critical to our community's wellbeing, with sales and use tax making significant contributions towards City of Arvada services and operations, and

WHEREAS, in 2025, the Arvada Economic Development Association helped welcome 126 net new businesses to Arvada and awarded more than $200,000 in grant funding for business improvements and conducted over 150 business retention visits, and

WHEREAS, the City of Arvada, AEDA, and our community partners promote economic well-being and quality of life for its community by creating, retaining and expanding jobs that facilitate growth, enhance wealth and provide a stable tax base, and

WHEREAS, our economic development professionals play a crucial role as connectors and collaborators between business owners and City of Arvada government, helping ensure that businesses can locate, grow, and thrive in our city.

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designate the week of May 4th – 8th as Economic Development Week and encourage all Arvada community members to join us in thanking the economic development teams that are helping create a resilient and thriving Arvada.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.E.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Building Safety Month - Presented by Mayor Pro Tem Moorman

Report in Brief

City Council will proclaim the month of May 2026 as Building Safety Month.

Team members from the Building Safety Division and Arvada Fire will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Kyley Flynn, Chief Building Official	04/13/2026
Josie Suk, Development Systems and Administrative Manager	04/16/2026
Jessica Garner, Director of Community and Economic Development	04/16/2026
Kelsy Sargent, Assistant City Attorney	04/16/2026
Rachel Morris, City Attorney	04/18/2026
Linda Haley, Deputy City Manager	04/19/2026
Don Wick, City Manager	04/20/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, The City of Arvada is committed to building a safe, resilient, and accessible community; and

WHEREAS, every year, May is designated by the International Code Council as Building Safety Month; and

WHEREAS, this year's theme, "Built to Last," encourages us all to raise awareness about building safety and highlights the role of building safety and fire code officials, builders, design professionals, tradespeople, and laborers who work year-round to ensure the safe construction of buildings; and

WHEREAS, our confidence in the resilience of the buildings that make up our community is achieved through the devotion of these vigilant guardians, and we acknowledge the essential service provided to all of us by our Building Safety Division and fire protection districts who are experts in the built environment and use the highest-quality codes to protect us in the buildings where we live, learn, work, and play; and

WHEREAS, the City of Arvada has adopted new building codes this year that will ensure that our community is following the latest guidance for building materials, sustainable technology, and safeguards to protect our community from hazards such as floods, fires, and wildland fires.

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designate the month of May 2026 as Building Safety Month and encourage all Arvada community members to recognize the importance of building safety, to raise awareness of its role in protecting lives and property, and to support the professionals who work every day to ensure our buildings are safe, resilient, and built to last.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.F.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for ALS Awareness Month - Presented by Councilmember Ambrose

Report in Brief

City Council will proclaim May 2026 as ALS Awareness Month.

Tami Anderson, Senior Development Manager with ALS United Rocky Mountain will be present to accept the proclamation. Two Arvada residents, Brandy Maila and Becca Ruiz also contacted Councilmember Davis asking that the month of May be designated as ALS Awareness Month. They were both invited to attend and may be present in the audience.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/09/2026
Megan McCall, Assistant City Attorney II	04/09/2026

Approved by:

Rachel Morris, City Attorney	04/14/2026
Linda Haley, Deputy City Manager	04/14/2026
Don Wick, City Manager	04/14/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, amyotrophic lateral sclerosis, also commonly known as Lou Gehrig's disease, is a progressive fatal neurodegenerative disease in which a person's brain loses connection with their muscles, slowly reducing a person's ability to walk, talk, eat, and eventually breathe; and

WHEREAS, thousands of new amyotrophic lateral sclerosis (ALS) cases are reported every year, and estimates show that every 90 minutes, someone is diagnosed with ALS and someone passes away from ALS and on average, patients diagnosed with ALS survive only two to five years from the time of diagnosis, and the exact causes of ALS are unknown and there is no known cure; and

WHEREAS, people who have served in the military are more likely to develop ALS and die from the disease than those with no history of military service, and securing access to new therapies, durable medical equipment, and communication technologies is of vital importance to people living with ALS; and

WHEREAS, clinical trials play a pivotal role in evaluating new treatments, enhancing quality of life, and fostering assistive technologies for those living with ALS, and the ALS Association is the largest philanthropic funder of ALS research globally and has committed more than $154 million to support more than 550 projects across the United States and 18 other countries; and

WHEREAS, the ALS Association is committed to make ALS livable and cure it for everyone, everywhere, and Amyotrophic Lateral Sclerosis Awareness Month provides an opportunity to increase public awareness of the dire circumstances of people living with ALS, acknowledge the terrible impact this disease has on those individuals and their families, and support research to eradicate this disease.

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designate the month of May 2026 as ALS Awareness Month and call upon all Arvada citizens to join in supporting ALS research and stand in solidarity with those affected by this relentless disease.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.G.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Drinking Water Week - Presented by Councilmember Davis

Report in Brief

City Council will proclaim May 3-9, 2026 as Drinking Water Week.

Infrastructure team members will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/13/2026
Megan McCall, Assistant City Attorney II	04/15/2026

Approved by:

Rachel Morris, City Attorney	04/18/2026
Linda Haley, Deputy City Manager	04/19/2026
Don Wick, City Manager	04/20/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, drinking water is a vital natural resource, essential to the health, safety, and well-being of our Arvada community, and

WHEREAS, the City of Arvada is committed to providing high-quality drinking water to protect public health, aid in fire protection, and support our economy and quality of life, and

WHEREAS, we recognize the importance of protecting our water sources, investing in water infrastructure, and bringing awareness to the public about the value of water, and

WHEREAS, National Drinking Water Week provides an opportunity to highlight the critical role water plays in our daily lives and thank the dedicated individuals who help ensure our water is safe and reliable, and

WHEREAS, Colorado and the greater Denver metro region face ongoing drought conditions that underscore the urgency of responsible water stewardship, and

WHEREAS, the City of Arvada has implemented watering restrictions to preserve our shared water supply and protect the long-term reliability of water service for all residents, and

WHEREAS, every Arvada resident has a role to play in conserving our water supply through wise outdoor watering practices and a commitment to using only what is needed, and

WHEREAS, the investments our community makes today in water conservation will help safeguard the health, vitality, and resilience of Arvada for the future;

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designate May 3-9, 2026, as Drinking Water Week and encourage all residents, businesses, and organizations to continue their commitment to conserving water and learning about their drinking water.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem

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Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember

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Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember

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Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 5.H.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Proclamation for Affordable Housing Month - Presented by Councilmember Fifer

Report in Brief

City Council will proclaim May 2026 as Affordable Housing Month.

Sam Bradley, Housing Development Specialist, will be present to accept the proclamation.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator	04/13/2026
Megan McCall, Assistant City Attorney II	04/15/2026

Approved by:

Rachel Morris, City Attorney	04/18/2026
Linda Haley, Deputy City Manager	04/19/2026
Don Wick, City Manager	04/20/2026

Enclosure, exhibits & attachments required to support the report

WHEREAS, access to affordable housing is critical to the overall well-being of all individuals and local businesses and yet many Arvadans struggle to find an affordable home; and

WHEREAS, the City of Arvada has felt the negative impacts of the ongoing housing crisis, due to the lack of less expensive housing options for workers, seniors, and other residents requiring support; and

WHEREAS, the City recognizes the long-term detriments to individuals and businesses within the community, and seeks to address housing challenges through strategic intervention to encourage the development and preservation of a wide range of housing options; and

WHEREAS, the City continues to follow the recommendations of the Arvada Housing Strategic Plan and provide support to a variety of projects in the form of direct assistance, such as loans, grants, partnerships, and vouchers, and indirect assistance, such as strategic policy decisions; and

WHEREAS, the City will continue to coordinate and collaborate with other cities, counties, non-profits, and state-level organizations to address the housing crisis; and

WHEREAS, Affordable Housing Month is a time to celebrate past success stories and take lessons and solutions into future opportunities to create and preserve housing for all people, regardless of income level, throughout their lives.

NOW, THEREFORE, BE IT PROCLAIMED that the Mayor and the Arvada City Council hereby designate the month of May 2026 as Affordable Housing Month and call upon our community to support affordable housing solutions and to recognize the efforts of the City, the Arvada Housing Authority and its partners to improve access to affordable housing in Arvada.

Dated this 5th day of May 2026.

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Lauren Simpson, Mayor

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Randy Moorman, Mayor Pro Tem Shawna Ambrose, Councilmember

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Sharon Davis, Councilmember Bob Fifer, Councilmember

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Michael P. Griffith, Councilmember Rebecka Lovisone, Councilmember

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 6.A.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Arts & Culture Commission Presentation (Presenters: Adelle Burton and Arts & Culture Commission members Kimberly Wagner and Tory Fink)

Report in Brief

PRESENTER: Adelle Burton and Arts & Culture Commission: Kimberly Wagner and Tory Fink

The Arvada Arts and Culture Commission (AACC) has developed a presentation summarizing their recent work and strategic priorities for the coming year. Discussion topics include: providing an overview of the commission's annual operations, updates on upcoming projects, highlights from past projects, and other priorities related to arts and culture in Arvada

Prepared by:
Adelle Burton, Special Events Coordinator

Reviewed by:

Approved by:

Derrick Kuhl, Deputy Director VCN	04/15/2026
Jermel Stevenson, Director VCN	04/15/2026
Bryan Archer, Chief Financial Officer	04/15/2026
Gail Walker, Legal Specialist-Contracts	04/15/2026
Janelle Strickler, Assistant City Attorney	04/15/2026
Rachel Morris, City Attorney	04/18/2026
Allison Scheck, Deputy City Manager	04/18/2026
Don Wick, City Manager	04/18/2026

Enclosure, exhibits & attachments required to support the report

ARVADA arts & culture COMMISSION

Kimberly Wagner, Chair
Tory Fink, Vice-Chair

ARVADA ARTS & CULTURE COMMISSION

May 5, 2026

ARVADA arts & culture COMMISSION

We use the arts to create deeply connected communities.

Commission members:

Kimberly Wagner
Sarah Kolb
Heather Steffen
Judy Gardner
Mark Nelson
Tory Fink
Cathy Moore
Jeffrey Colebank (not pictured)
Emily Murgia (not pictured)



ARVADA arts & culture COMMISSION

The Arvada Arts & Culture Commission

- Makes places that deepen community attachment
- Invests in the future of arts and culture
- Creates a diversity of arts experiences for all
- Makes a home for artists and creative industry

ARVADA arts & culture COMMISSION

PUBLIC ART COLLECTION



ARVADA arts & culture COMMISSION



Arts Maintenance

- Evaluates and maintains condition of 200+ artworks in the city's collection
- Treat and repair worn and damaged artworks to preserve value and investment

ARVADA arts & culture COMMISSION



OLDE TOWN

ARVADA arts & culture COMMISSION



Olde Town Arvada

- Four painted electric boxes
- Three ground murals
- Olde Town mural
- Denver Beer Co. Mural
- Mural Funding
- Olde Town Revitalization work in the future

ARVADA arts & culture COMMISSION



SHORT STORY MACHINE



Short Edition

Short Story Dispenser

- Activates local businesses with a free cultural experience
- Machine moves each quarter
- Over 2,800 stories dispensed per year
- Community story/memory submissions for 250/150

ARVADA arts & culture COMMISSION



Recent Short Edition Locations:

Malones, Luki Brewery, La Dolce Vita

Currently: Stonebridge Retirement Community

Future: Deeply Rooted Music School, Outside the Box, Power Cone, Tribe Mind Wellness, and Firehouse Subs

ARVADA arts & culture COMMISSION

MURALS



ARVADA arts & culture COMMISSION

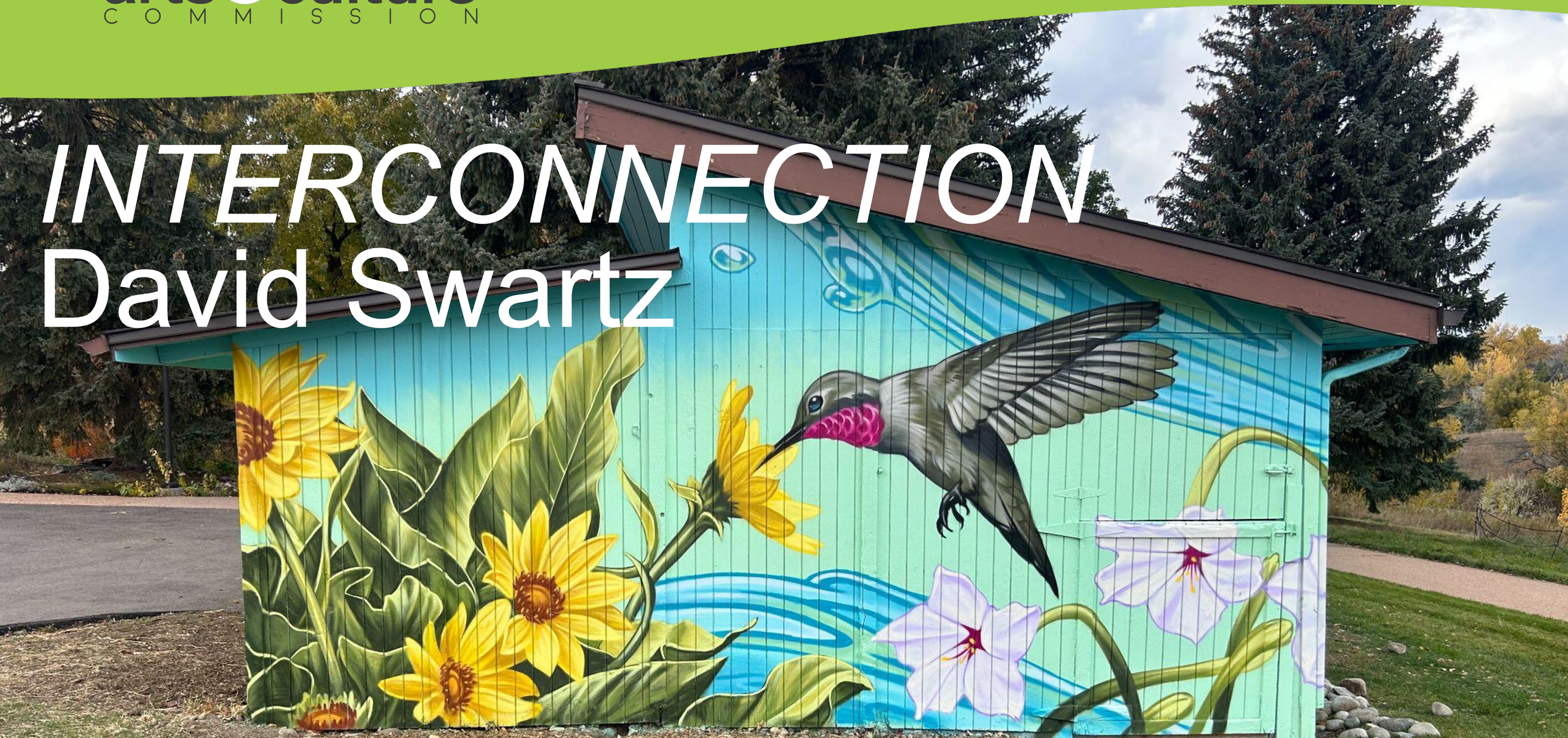


Greater Arvada area

- *La Letra* - Marco Antonio Garcia
- *Nature Notes* - Catie Michel
- Quaker St. Underpass - Anna Charney
- Babe Walls murals
- Olde Town Shindig - Nutrition Building
- Ethan's Gallery
- *A Place for James* - Graham Carraway
- *Interconnection* - David Schwartz

ARVADA arts & culture COMMISSION

INTERCONNECTION
David Swartz



ARVADA arts & culture COMMISSION

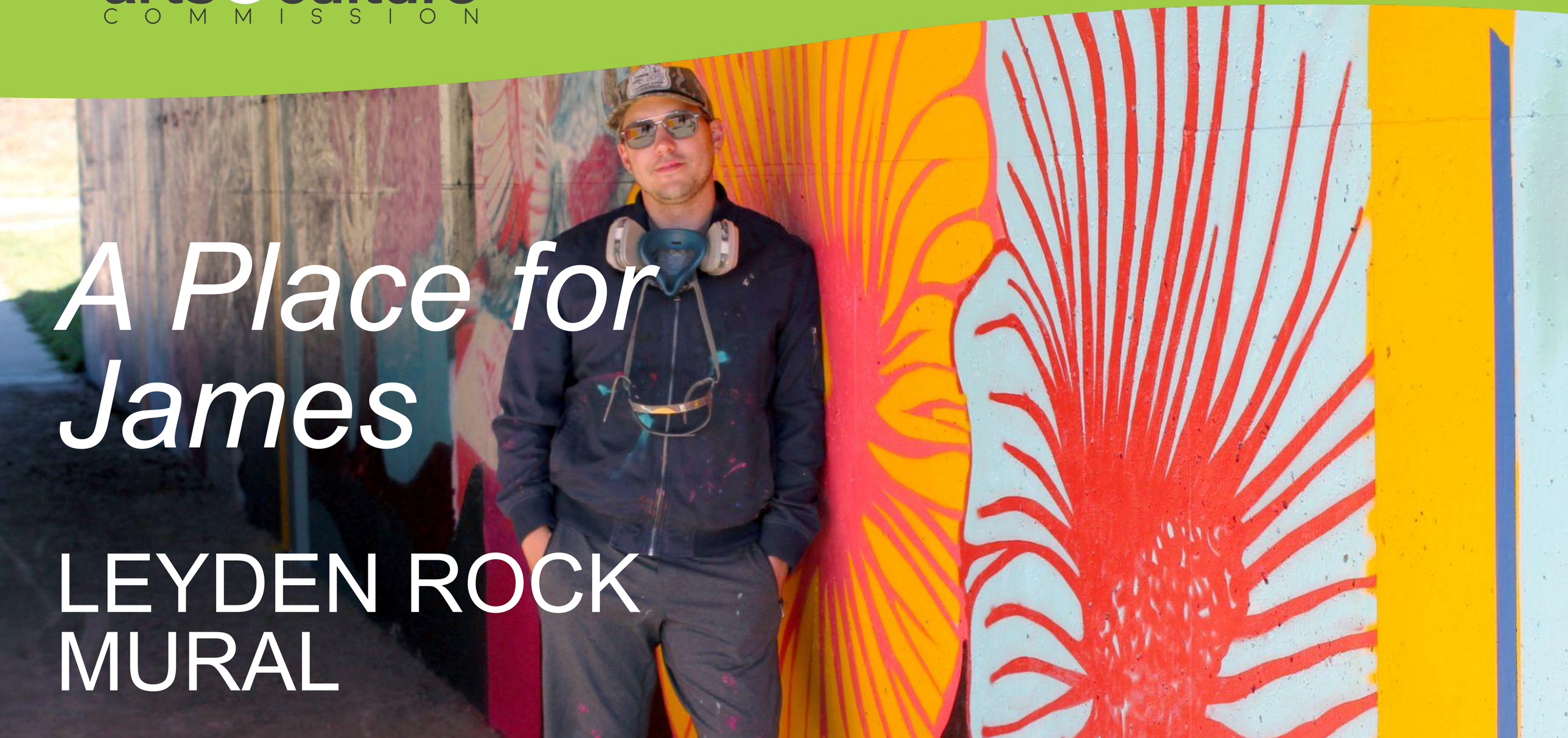


Interconnection

- Began as a proposal from an AACC member, Mark Nelson.
- The AACC collaborated with Majestic View and held a call for entry

  Their goals:
  - Incorporate nature and an ecological narrative to complement Majestic View
  - Artist- David Swartz
- Involved AACC, Majestic View staff to select artist & design

ARVADA arts & culture COMMISSION



A Place for James

LEYDEN ROCK MURAL

ARVADA arts & culture COMMISSION



A Place for James

- Site proposal came from a community member who uses the trails and suggested this bike path location.
  - AACC & community member involved in select artist & design
- Public art integrated into trail systems in Arvada.
- Artist - Graham Carraway
- Fulfills goal of expanding public art west

ARVADA arts & culture COMMISSION



PUBLIC ART MAP

ARVADA arts & culture COMMISSION

Permanent Collection | Murals | Arvada Arts & Culture Commission



Anemotive Kinetic 8/08 by Robert Mangold

Colorado artist Robert Mangold (1937–2023) is known for his sculptures that explore concepts of space and motion. This vibrant red kinetic sculpture, "Anemotive Kinetic 8/08" features sails that catch the wind, causing the metal rings to spin around a centralized pole. Located at Arvada Center Grounds, 6901...



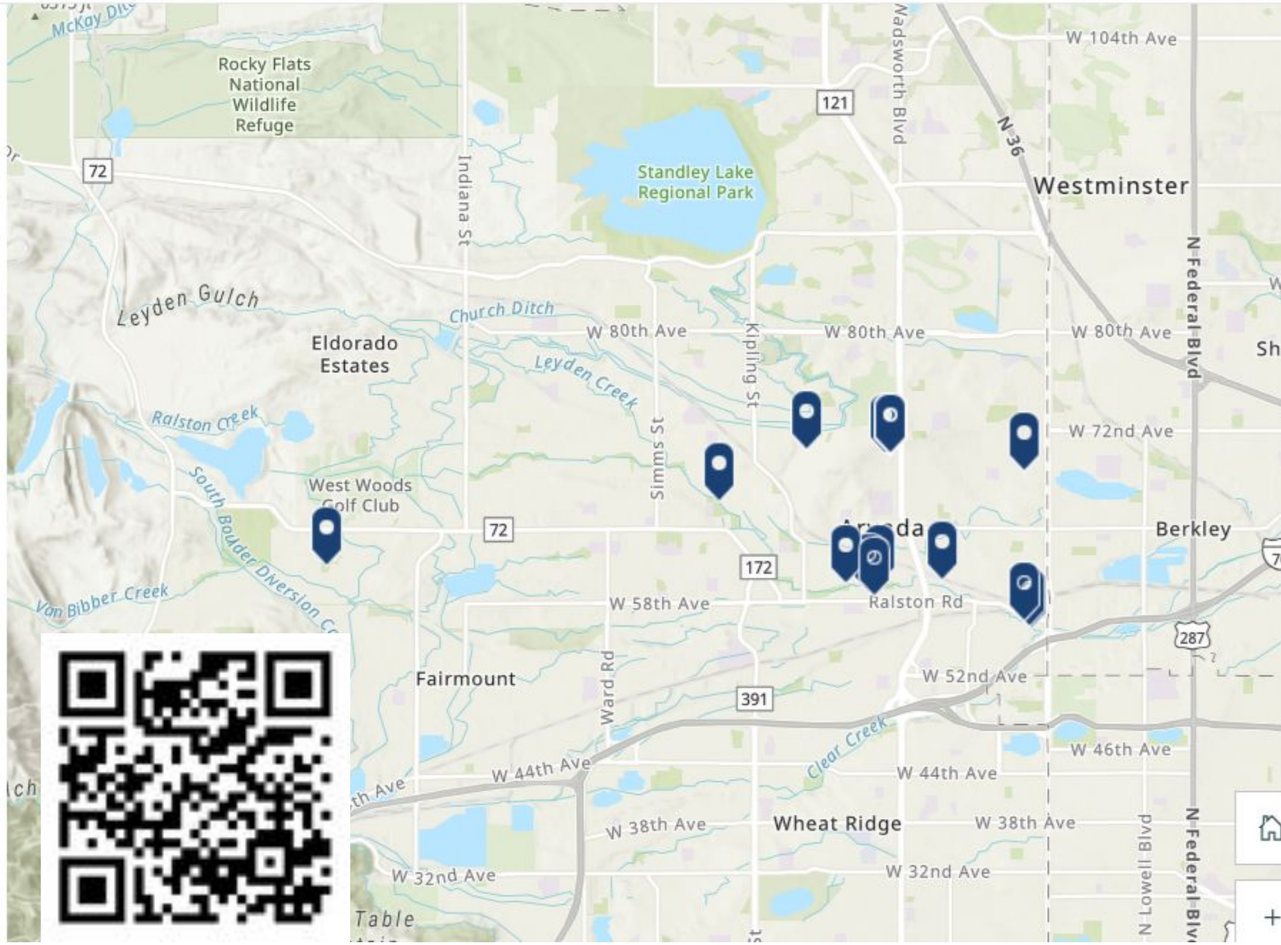
Apology to JB by Nikki Pike

"Apology to JB" is part installation and part written apology. It is a confession on behalf of Americans to our lacking commitment toward environmental action and change. The work references Joseph Beuys' 7000 Oaks ecological intervention where in five years he led the planting of 7000 trees. A monolithic stone was...



Arch #5 / Wyoming Arch by John Van Alstine

Creating a fascinating balance between weightlessness, structure, and nature, John Van Alstine's "Arch #5 / Wyoming Arch" features slabs of stone suspended on cylindrical rods between fourteen sandstone slabs. Located at Arvada Center Grounds, 6901 Wadsworth Blvd, Arvada, CO 80003



ARVADA arts & culture COMMISSION

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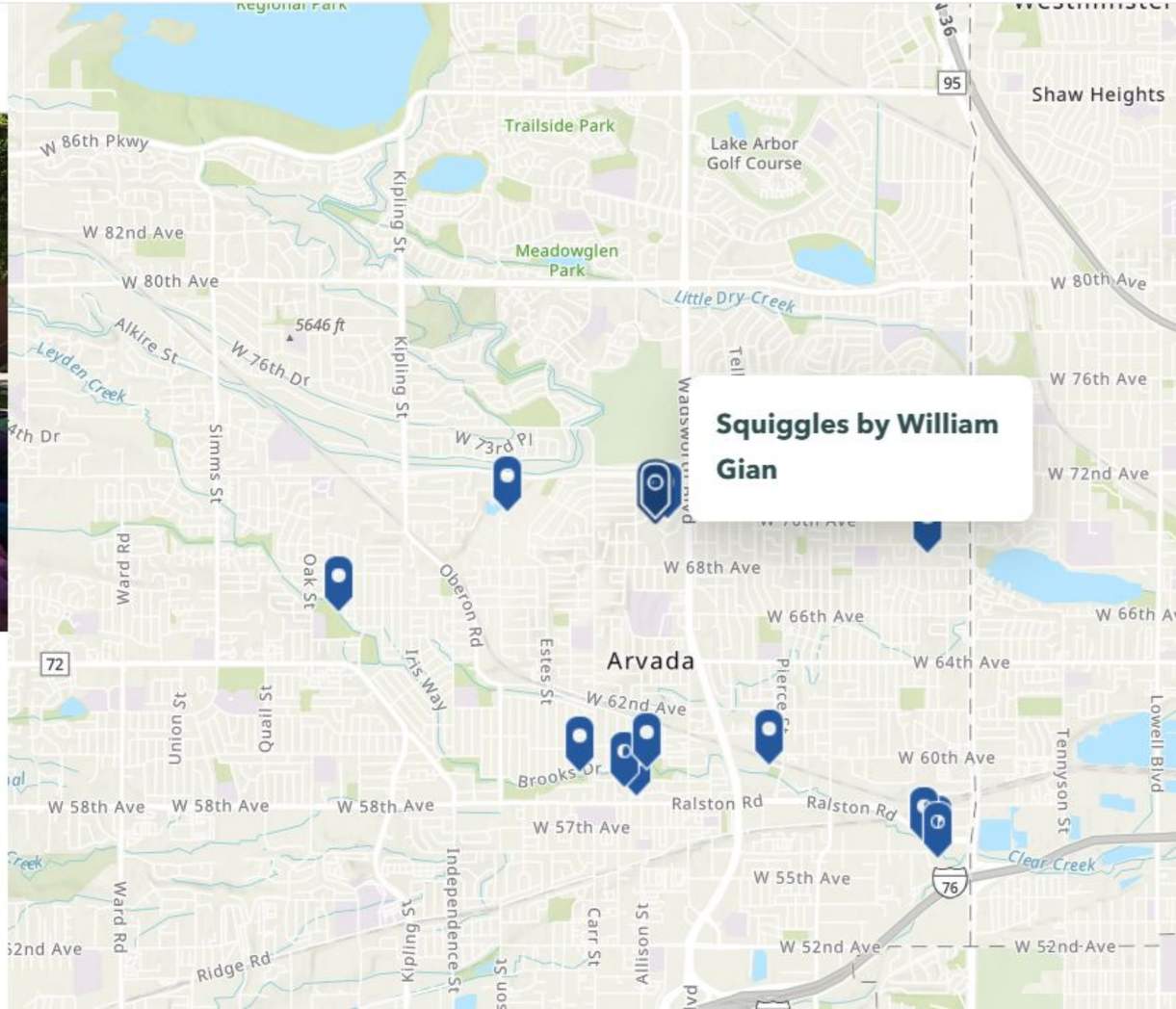


Squiggles by William Gian

"Squiggles," by William Gian, is an interactive 343-foot-long concrete "seasaurus" that sits outside of the Arvada Center's entrance. "Squiggles" is the unofficial mascot of the Arvada Center, and has hosted many generations of kids and families as they climb over her

ARVADA arts & culture COMMISSION

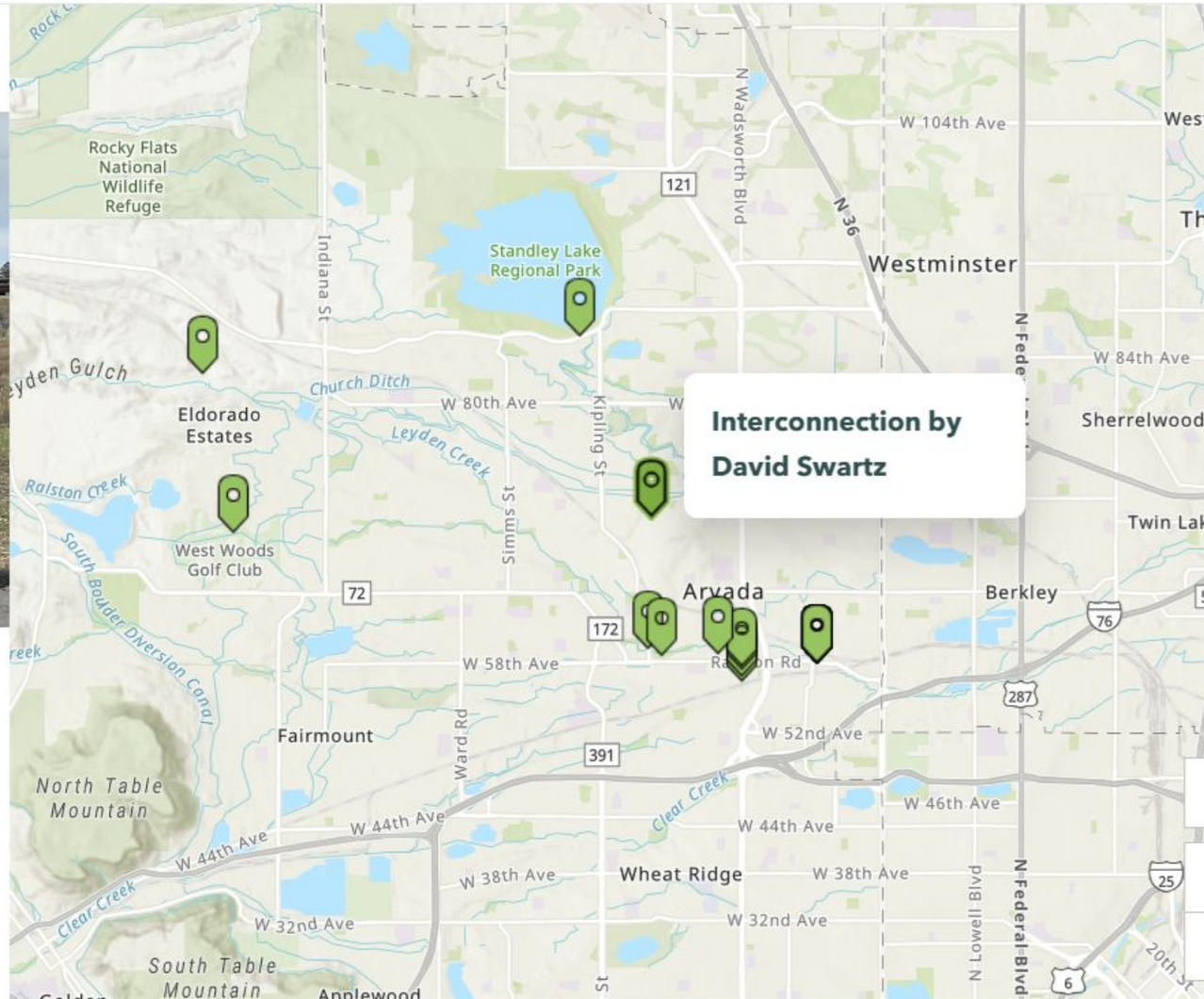
— Back

17 / 26



Interconnection by David Swartz

David Swartz's mural focuses on the diverse local flora and fauna. This artwork celebrates biodiversity and emphasizes key species such as the bumblebee, a broad-tailed hummingbird, mule deer, and a western painted turtle.



ARVADA arts & culture COMMISSION

AACC GOALS for 2026

ARVADA arts & culture COMMISSION



2026 Goals

- Public Art Map
  - Follow up digital map with printed brochure piece
- Visibility at Winterfest & Summerfest
- Jeffco schools traffic boxes - Arvada West High School
- Story submissions for 250/150 - Launching May 1

ARVADA arts & culture COMMISSION



2026 Goals

- Aquatic Center sculpture
- Re-locate FanFare sculpture - ongoing
- Two future murals along public trails
- Olde Town Revitalization projects

Thank you

ARVADA arts & culture COMMISSION

WE USE THE ARTS TO CREATE DEEPLY CONNECTED COMMUNITIES.

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 8.A.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Consent Agenda

Report in Brief

1. R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00

2. R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation

Suggested Motion: Moved by: _____ I move that the Consent Item(s), Number(s)_____
be
(Removed from the Consent Agenda and Heard Upon Item _____) (Referred to a Workshop) (Postponed Indefinitely).

YES _____ NO _____ ABSENT _____

That All/Remaining Consent Items be (Approved) (Rejected).

YES _____ NO _____ ABSENT _____

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report

CITY OF ARVADA

REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM 8.A.1.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00

Report in Brief

Presenter: Brian Lavey, Civil Engineer

Olsson, Inc. will provide design services to deliver plans, specifications, reports, and estimates to complete the construction of the 25-ST-20 Leyden Road Improvements Project. The existing Orion Way to Indiana Street corridor has no bike lanes or sidewalks and does not meet the width needed for three lanes of traffic in emergency situations. This design will address these needed transportation, pedestrian, and emergency egress issues for the Leyden Road corridor. The project has sufficient budget to fully fund the design scope.

The Arvada team recommends that the City Council approve R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00 in the First Year.

Financial Impact

CIP Project: 25-ST-20
CIP Project No: PRJ21091617
Financial Impact: $899,738.00
Funding Source: Traffic Impact Fees from the Leyden Rock Annexation Agreement
Type: CIP

Background

The Leyden Road (W. 82nd Avenue) Improvements project will widen sections of Leyden Road, a major east-west corridor in the northwestern section of the City. The project originated from the City entered into a Development Agreement for the Leyden Rock development. The project will fund the design of improvements along the corridor through Traffic Impact Fees and additional CIP funds. In particular, Orion Way to Indiana Street is an existing section with a narrow road section and no existing bike lanes or pedestrian facilities. This section also handles the highest traffic counts along the corridor and is the priority focus for the project. The existing sidewalk and bike lanes terminate on the western side of the Orion Way/Leyden Road intersection and are proposed to continue to Indiana Street as a part of the widening and will allow pedestrian access along the corridor. An additional goal of the project is to satisfy emergency egress width requirements for the corridor east of the Leyden Rock community to Indiana Street. Private property right-of-way acquisition, construction easements, and possible Jefferson County right-of-way acquisition will be required as part of the project.

Discussion

The Arvada team released a Request for Proposals, 26-ENG-002 on December 19, 2025, to provide the design services for the Leyden Road Improvements project. The City team received eleven (11) proposals and scored the proposals from each firm based on the proposal's project approach, project understanding, team experience, schedule, value engineering, value of proposal's cost, and performance measures.

The proposal from Olsson Inc. was ranked the highest by the City team and provides the best value to the City. Olsson has the required experience and availability, as well as a detailed project approach to complete the design per City standards.

The Arvada team recommends that the City Council approve resolution R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The proposed action aligns with the Infrastructure Priority Area of the City Council Strategic Plan INF5: Applies cost-effective and timely engineering, planning and design, construction practices, and established standards and specifications to align public infrastructure reinvestment capacity with community needs.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00.

Suggested Motion:

I move that R26-034, A Resolution Authorizing an Agreement Between the City of Arvada and Olsson, Inc., for Design Services Relating to the Leyden Road Improvements in an Amount not to Exceed $899,738.00, be (approved) (rejected).

Prepared by:
Brian Lavey, Civil Engineer II

Reviewed by:

Approved by:

Claudia Vaughan, City Engineer	04/14/2026
Jacqueline Rhoades, Director of Infrastructure	04/16/2026
Bryan Archer, Chief Financial Officer	04/17/2026
Tammy Hedlund, Legal Specialist	04/17/2026
Zachary Woolweaver, Assistant City Attorney I	04/17/2026
Rachel Morris, City Attorney	04/20/2026

Allison Scheck, Deputy City Manager	04/22/2026
Don Wick, City Manager	04/24/2026

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R26-034

A RESOLUTION TO AN AGREEMENT BETWEEN THE CITY OF ARVADA AND OLSSON, INC., FOR DESIGN SERVICES RELATING TO THE LEYDEN ROAD IMPROVEMENTS IN AN AMOUNT NOT TO EXCEED $899,738.00

WHEREAS, the City of Arvada requires a professional engineering firm to assist in designing the Leydon Road project from Indiana Street to Culebra Street; and

WHEREAS, Olsson, Inc. is a qualified professional engineering firm that was selected after a formal solicitation pursuant to A.C.C. Chapter 82.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Agreement that is in substantially the same form as that attached hereto.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 5th day of May, 2026.

_____
Lauren Simpson, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

AN AGREEMENT BETWEEN THE CITY OF ARVADA AND OLSSON, INC. FOR DESIGN SERVICES RELATING TO THE LEYDEN ROAD IMPROVEMENTS IN AN AMOUNT NOT TO EXCEED $899,738.00 IN THE FIRST YEAR

1. PARTIES. The Parties to this Agreement are the City of Arvada, a Colorado home rule municipal corporation, whose mailing address is 8101 Ralston Road, Arvada, CO 80002 ("Arvada" or the "City") and Olsson, a Nebraska corporation whose principal place of business is located at 601 P Street, Suite 200, Lincoln, NE 68508 ("Consultant" or "Contractor"). The Parties may be referred to individually as a "Party" and collectively as the "Parties."

2. RECITALS AND PURPOSE.

2.1. Arvada requires a qualified entity to provide Design Services for the Leyden Road Improvements.

2.2. On or about December 19, 2025, Arvada issued a Request for Proposal for Design Services for the Leyden Road Improvements ("RFP 26-ENG-002"), seeking responses from qualified entities to provide professional services as described in Sec. 2.1 ("the Work").

2.3. Consultant has extensive experience in design services. On or about February 5, 2026, Consultant submitted its Request for Proposal in response to Arvada's Request for Proposal ("Response").

2.4. Arvada has determined that Consultant has the requisite background, skill, expertise, and insurance to provide the requested professional and other related services, under the terms and conditions more fully set forth below.

2.5. Arvada and Consultant agree that Arvada contemplates using Consultant as a Consultant for the Work as described in the Contract Documents. However, Arvada and Consultant acknowledge and agree that Arvada may, at its sole discretion, use other Consultants to perform similar professional services, and that this Agreement in no way limits Arvada from hiring other consultants or constitutes a contract for exclusive services from Consultant.

3. CONTRACT DOCUMENTS AND EXHIBITS.

3.1. Contract Documents. The Contract Documents shall consist of this Agreement together with the following:

Exhibit A: Arvada's RFP 26-ENG-002 including General Terms and Conditions;

Exhibit B: Consultant's Response;

Exhibit C: Statement of Work (SoW); and

Exhibit D: Insurance Requirements.

All exhibits referred to in this Agreement are attached hereto and are, by reference, incorporated herein for all purposes.

3.2. Interpretation of Contract Documents. In the event any matter, term, provision, or condition that is the subject of this Agreement requires clarification or is in dispute, or is the subject of a difference of opinion, then the terms of this Agreement shall control, and then the terms of **Exhibit A**, and then **Exhibit B**, and then **Exhibit C**, and then **Exhibit D** in that order.

4. TERM AND TERMINATION.

4.1. Effective date. This Agreement will become effective and binding on both Parties upon its execution by Arvada.

4.2. Term. The term of the Agreement shall remain in effect until all work required under the SoW is completed, unless otherwise agreed to in writing by the Parties, and subject to availability of funds.

4.2.1. Termination. Notwithstanding the above, Arvada may terminate this Agreement with or without cause upon 30 days written notice and in accordance with the provisions of this Agreement and **Exhibit A**.

5. COMPENSATION.

5.1. Payment. Arvada shall pay Consultant for the Work requested by Arvada and rendered by Consultant under this Agreement in an amount not to exceed $899,738.00.

5.1.1. Itemized invoices. Consultant shall submit itemized monthly invoices to Arvada for actual services that have been accepted by Arvada and performed by Consultant. Payment by Arvada will be due NET 30 days.

5.2. Other services. While Arvada has listed the primary requirements for its solicitation in the RFP 26-ENG-002, Arvada may, during the term of this Agreement, wish to purchase other related services identified and offered by Consultant, based upon the pricing and fee amounts contained in the Contract Documents.

6. SCOPE OF SERVICES. Consultant shall perform the Work as described in the Contract Documents or as amended by the mutual consent of the Parties in writing. The Scope of Work is reflected in **Exhibit C.** Should the Parties agree in writing to a change in the scope of services or a change in a deadline provided in the Contract Documents, then the Parties

will timely execute an amendment, which will address the amended scope of services, revisions to necessary start and end dates, any applicable deliverables and associated due dates, reporting requirements, documentation requirements, and any other matters that the Parties deem necessary.

7. TERMS AND CONDITIONS IN CONTRACT DOCUMENTS. Consultant affirms that it has read and is familiar with all of the Contract Documents including the General Terms and Conditions set forth in the City's solicitation or otherwise attached to this Agreement, and agrees to be bound by those Terms and Conditions.

7.1 If the Consultant is going to produce a report or other written work product, insert: Ownership of work product. Consultant agrees that the Work is made for hire as encompassed by 17 U.S.C. § 201(b), and further agrees that Arvada owns or otherwise hold all rights comprised in any and all copyrights in the Work created or developed under the Agreement, including the rights to any written report drafted by Consultant under this Agreement. Consultant acknowledges that other provisions relating to the ownership of the Work are set forth in Exhibit A, and are binding on Consultant.

8. PERFORMANCE MEASURES. The Performance Measures for this Agreement shall be those proposed by Consultant in its Response and accepted by Arvada.

9. PROJECT OWNERS. Arvada designates Brian Lavey as Arvada's Project Owner. Mr. Lavey (blavey@arvada.org) will be Arvada's responsible staff member to provide direction to Consultant during the course of the Work. Arvada reserves the right to change the Project Owner(s) at its discretion and will promptly notify Consultant of any such change in writing. Consultant designates Lee Kunselman as Consultant's Project Owner. Mr. Kunselman (lkunselman@olsson.com) will be Consultant's primary contact person during the course of this Agreement. Consultant may change the Project Owner(s) with Arvada's prior written approval.

10. INSURANCE. Consultant will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Consultant under the terms of the Contract Documents. Consultant's failure to secure and maintain sufficient insurance at any time during the pendency of this Agreement do not relieve Consultant of its obligations under this provision; Contractor's failure to fulfill the obligations of this section will make the Consultant the *per se* insurer.

10.1. Insurance exhibit. Consultant shall maintain insurance in the types and amounts shown in **Exhibit D**.

11. INTEGRATION, AMENDMENT, AND SEVERABILITY. This Agreement represents the entire agreement between the Parties; there are no oral or collateral agreements or understandings. The Parties, by mutual agreement, may amend this Agreement at any time. Any amendments must be in writing and will be incorporated into and made a part of this Agreement. If any provision in this Agreement is held to be invalid

or unenforceable, the remainder of this Agreement will be deemed severable, and as such, the remaining provisions will continue in full force and effect.

12. **NOTICES.** Any notice or notification required or permitted by the Agreement shall be in writing, and may be sent to the other Party by certified or registered mail, or by electronic mail, addressed to the that Party's project owner at such street address or email address as are set forth herein or subsequently designated by the Parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail or, in the case of electronic mail, upon the sent date stamp contained in the electronic mail.

13. **ADDITIONAL DOCUMENTS OR ACTION.** The Parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

14. **BINDING AUTHORITY.** Consultant represents and affirms that the signature page hereof accurately states the full legal name of Consultant (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Consultant, and in all other respects is effective to bind Consultant, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

15. **NO THIRD-PARTY BENEFICIARIES.** The Parties understand and agree that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties, and nothing contained in this Agreement shall give or allow any such claim or right of action to any other third party on this Agreement. It is the intention of the Parties that any person other than the Parties receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

The rest of this page is intentionally left blank.

DATED this_____day of_____, 2026.

CITY OF ARVADA, a Colorado home rule municipal corporation

_____
Lauren Simpson
Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

OLSSON, INC., a Nebraska corporation

_____
Jessica Burch
Principal in Charge
1525 N. Raleigh Street, Suite 400
Denver, CO 80204
jburch@olsson.com

Exhibit A

AN AGREEMENT BETWEEN THE CITY OF ARVADA AND OLSSON, INC. FOR DESIGN SERVICES RELATING TO THE LEYDEN ROAD IMPROVEMENTS IN AN AMOUNT NOT TO EXCEED $899,738.00 IN THE FIRST YEAR

REQUEST FOR PROPOSAL

Proposal #:	**26-ENG-002**
Title:	**Design Services Leyden Road Improvements**
RFP Issued:	December 19, 2025
Pre-Proposal Meeting:	**January 14, 2026 10:00 AM MT** **Join Zoom Meeting** **https://arvadaco-gov.zoom.us/j/85078472077?pwd=29o6NpwgwCuWHTxKsSeuQoofwDAySb.1** Meeting ID: 850 7847 2077 Passcode: 151925
Question Deadline:	January 20, 2026 2:00 PM MDT Questions must be submitted through BidnetDirect.com. Responses will be posted on Bidnet via addendum.
Proposals Due By:	**February 3, 2026 2:00 PM MDT** Electronic Submissions must be submitted online at BidNetDirect.com. This is the only valid source for postings regarding this solicitation. Late responses will not be considered for award.
Projected Start Date:	March 2026

For additional administrative information not related to the project contact: Doreen Mazza, dmazza@arvada.org
Contact with the requesting department may result in vendor disqualification.

ARVADA'S VISION MISSION AND VALUES

VISION: We dream big and deliver.
MISSION: We are dedicated to delivering superior services to enhance the lives of everyone in our community.
VALUES:

Innovation – We excel in creativity, flexibility and the use of best practices while valuing diverse backgrounds, ideas and perspectives. **Passion** – We are a high performing, inclusive team inspiring each other to pursue excellence.
Opportunity – We value our diversity, embrace possibilities, face challenges, persevere and take action to deliver quality results.



Documents included in this Request:

General Terms and Conditions	page 3
Special Terms and Conditions	page 5
Insurance Requirements	page 6
Administrative Information and Evaluation Criteria	page 7
Statement of Work	page 9
Required Vendor Submittal Form, Submittal Checklist	page 14
Performance Measures Form	page 16

List of Attachments - All Attachments are available in Bidnet

1. Leyden Road Concept Section
2. Geotechnical Report
3. Limited Site Investigation (LSI)
4. Bicycle Master Plan Map
5. Comprehensive Plan Maps
6. Leyden Rock Metro District Emergency Preparedness Study
7. Leyden Road Asbuilts – Indiana to Culebra
8. 2025 Traffic Counts
9. Leyden Rock Traffic Study
10. COA Utility Maps
11. Drainage Improvements Plans
12. Leyden Ranch Offsite Sanitary Plans

GENERAL TERMS AND CONDITIONS

1. **NO MULTI-YEAR FISCAL OBLIGATION.** Financial obligations of Arvada payable after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted, and otherwise made available by the City Council for Arvada. Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution (TABOR).

2. **TAXES.** Arvada shall not be liable for the payment of any excise, sales, or use taxes. Arvada is exempt from federal excise taxes under I.R.C. Chapter 32 (26 U.S.C., Subtitle D, Ch. 32) and from State and local government sales and use taxes under §§39-26-704(1), *et seq.,* C.R.S. (Colorado Sales Tax Exemption Identification Number 98-01789). Contractor shall not invoice Arvada for any state, federal or local taxes. Upon written notification by Arvada, Contractor shall reimburse Arvada in a timely manner for any taxes erroneously paid by Arvada.

3. **NO INDEMNIFICATION BY ARVADA.** Arvada is prohibited under Article XI, Section 1 of the Colorado Constitution from indemnifying anyone. Despite any provision in any contract document to the contrary, Arvada does not indemnify Contractor or anyone else under the Agreement.

4. **INDEMNIFICATION OF ARVADA.** Contractor shall indemnify, defend, and hold harmless Arvada, its employees, agents and assignees (the "Indemnified Parties"), against any and all costs, expenses, claims, damages, liabilities, court awards, and other amounts (including attorneys' fees and related costs) arising from or related to any act or omission by Contractor, or its employees, agents, Subcontractors, or assignees in connection with the Agreement.
   4.1. **Confidential Information Indemnification.** Disclosure or use of Arvada Confidential Information by Contractor may be cause for legal action by third parties against Contractor, Arvada, or their respective agents. Contractor shall indemnify, defend, and hold harmless the Indemnified Parties, against any and all claims, damages, liabilities, losses, costs, expenses (including attorneys' fees and costs) incurred by Arvada in relation to any act or omission by Contractor, or its employees, agents, assigns, or subcontractors.
   4.2. **Intellectual Property Indemnification.** Contractor shall indemnify, save, and hold harmless the Indemnified Parties, against any and all costs, expenses, claims, damages, liabilities, and other amounts (including attorneys' fees and costs) incurred by the Indemnified Parties in relation to any claim that any Deliverable, Good or Service, software, or Work provided by Contractor under the Agreement (collectively, "IP Deliverables"), or the use thereof, infringes a patent, copyright, trademark, trade secret, or any other intellectual property right. Contractor's obligations shall not extend to the combination of any IP Deliverables provided by Contractor with any other product, system, or method, unless the other product, system, or method is (a) provided by Contractor or Contractor's subsidiaries or affiliates; (b) specified by Contractor to work with the IP Deliverables; (c) reasonably required in order to use the IP Deliverables in its intended manner and the infringement could not have been avoided by substituting another reasonably available product, system, or method capable of performing the same function; or (d) is reasonably expected to be used in combination with the IP Deliverables.

5. **GOVERNMENTAL IMMUNITY.** Liability for claims for injuries to persons or property arising from the negligence of Arvada, its departments, boards, commissions, committees, bureaus, offices, employees and officials shall be governed by the provisions of the Colorado Governmental Immunity Act, §§24-10-101, et seq., C.R.S. (CGIA). No term or condition of the Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions contained in the CGIA.

6. **OPEN RECORD REQUESTS.** Arvada is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-200.1 *et seq.*)(CORA), which may require Arvada to disclose all or a portion of communications relating to the Agreement, any transaction under the Agreement, and other related matters. Contractor has been advised to familiarize itself with CORA. Any confidentiality provisions in any contract documents are subject to the provisions of CORA.

7. **PROTECTION OF PERSONAL IDENTIFYING INFORMATION.** In the event the Agreement includes or requires Arvada to disclose to Contractor any Personal Identifying Information as defined in C.R.S. § 24-73-101, Contractor shall comply with the applicable requirements of C.R.S. §§ 24-73-101, et seq., relating to third-party service providers.

8. **NO THIRD PARTY BENEFICIARIES.** The Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than Arvada and Contractor. Enforcement of the Agreement and all related rights and obligations are reserved solely to Arvada and Contractor. Any services or benefits which third parties receive as a result of the Agreement are incidental and do not create any rights for such third parties.

9. **ASSIGNMENT.** Contractor's rights and obligations under the Agreement are personal and may not be transferred or assigned without the prior, written consent of Arvada. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Contractor's rights and obligations approved by Arvada shall be subject to the provisions of the Agreement. Any provision of an assignment that enlarges any duty, responsibility, or obligation of Arvada, or that limits, curtails, or diminishes any right or privilege of Arvada, without Arvada's express written consent, shall be void.

10. **BINDING EFFECT.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns.

11. **SURVIVAL.** Any provision of the Agreement that imposes an obligation on a party after the Agreement's termination or expiration shall survive the termination or expiration and shall be enforceable by the other party.

12. **SUBCONTRACTS.** Contractor shall not subcontract any of its responsibilities without Arvada's prior written approval, which will not be unreasonably withheld. Contractor shall submit to Arvada a copy of each such subcontract upon Arvada's request. All subcontracts Contractor enters into in connection with the Agreement shall comply with all applicable federal, state, and local laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of the Agreement. Contractor agrees it is fully responsible for subcontractors performing services under the Agreement. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.

13. **INDEPENDENT CONTRACTOR.** Contractor shall perform its duties under the Agreement as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of Arvada. Contractor shall not have authorization, express or implied, to bind Arvada to any agreement, liability, or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through Arvada and Arvada shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to the Agreement. Contractor shall: (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law; (ii) provide proof thereof when requested by Arvada; and (iii) be solely responsible for its acts and those of its employees and agents.**

14. **LICENSES, PERMITS, AND OTHER AUTHORIZATIONS.** Contractor shall secure, prior to the effective date, and maintain at all times during the term of the Agreement, at its sole expense, all licenses, certifications, permits, and other authorizations required to perform its obligations under the Agreement, and shall ensure that all employees, agents and subcontractors secure and maintain at all times during the term of their employment, agency or subcontract, all license, certifications, permits and other authorizations required to perform their obligations in relation to the Agreement.

15. **STANDARD AND MANNER OF PERFORMANCE.** Contractor shall perform its obligations under the Agreement in accordance with the highest standards of care, skill, and diligence in Contractor's industry, trade, or profession.

16. **TIME OF THE ESSENCE.** Contractor acknowledges and agrees that time is of the essence for this Agreement and that it is an essential term of this Agreement that Contractor maintain a rate of progress in the Services that will result in completion of the Services in accordance with this Agreement. To that end, Contractor agrees to proceed with all due diligence to complete the Services in a timely manner in accordance with this Agreement, and further agrees that failure to complete any of the Services during the Term of this Agreement, or as may be more specifically set forth in an attachment, exhibit, or modification, shall be deemed a breach.

17. **WAIVER OF BREACH.** A waiver by any party to the Agreement of a breach of any Agreement term shall not operate or be construed as a waiver of any subsequent breach by either party.

18. **RIGHT TO TERMINATE.** Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension. In the event Arvada terminates for convenience, Arvada will pay Contractor for requested work performed up until the time of termination, not to exceed the total amount of the contract price agreed upon by Arvada and Contractor.

19. **EXTERNAL TERMS AND CONDITIONS.** Notwithstanding anything to the contrary, Arvada shall not be subject to any provision included in any terms, conditions, or agreements appearing on Contractor's or a subcontractor's website or any provision incorporated into any click-through or online agreements related to the Work unless that provision is specifically referenced in the Agreement.

20. **PROHIBITED TERMS.** Any term included in the Agreement that requires Arvada to indemnify or hold Contractor harmless; requires Arvada to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Any term included in the Agreement that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under the Agreement, and no insurance policy shall be interpreted as being subject to any limitations of liability of the Agreement.

21. **COMPLIANCE WITH ALL LAWS.** Contractor shall comply with all applicable federal, Colorado and Arvada laws, rules, regulations, policies and procedures in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

22. **BINDING ARBITRATION PROHIBITED.** Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary shall be null and void.

23. **GOVERNING LAW AND VENUE.** Colorado law, rules, and regulations shall be applied in the interpretation, execution, and enforcement of the Agreement. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to the Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in Jefferson County.

24. **OWNERSHIP OF WORK PRODUCT.** The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of Arvada or others.

25. **SOFTWARE PIRACY PROHIBITION.** Arvada or other public funds payable under the Agreement shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of the Agreement and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If Arvada determines that Contractor is in violation of this provision, Arvada may exercise any remedy available at law or in equity or under the Agreement, including, without limitation, immediate termination of the Agreement and any remedy consistent with federal copyright laws or applicable licensing restrictions.

26. **ACCESSIBILITY COMPLIANCE.**

26.1 Arvada is obligated to comply with the Colorado Anti-Discrimination Act (C.R.S. §§24-34-300 et seq.)("CADA"), which requires all digital and online platform and content providers to comply with the minimum Accessibility Standards for Individuals with a Disability, adopted by the Colorado Office of Information Technology ("OIT") under C.R.S §24-85-103(2.5). Contractor has been advised to familiarize itself with CADA.

26.2 To the extent the Work or any of Contractor's services provided under the Agreement involves digital, technological components, including but not limited to software, websites, applications, digital documents (the "Material"), all Material shall comply with the OIT's currently adopted minimum Accessibility Standards for Individuals with a Disability at all times.

26.3 Contractor shall indemnify, save, and hold harmless Arvada, its employees, agents and assignees (the "Indemnified Parties") against any and all costs, expenses, claims, damages, liabilities, court awards and other amounts (including attorneys' fees and related costs) incurred by any of the Indemnified Parties in relationship to Contractor's failure to comply with Section (26.2) above.

26.4 Upon Arvada's request, Contractor shall certify to Arvada that its service(s) and digital documents are compliant with Section (26.2) above. Arvada may require Contractor's compliance to the OIT's currently adopted minimum standards of accessibility to be determined by a third party selected by Arvada to attest to Contractor's compliance.

SPECIAL TERMS AND CONDITIONS

1. PRICES FIXED AND FIRM FOR THE TERM OF THE CONTRACT

Prices proposed by the vendor shall remain fixed and firm during the term of the contract; however, the vendor may offer incentive discounts from the fixed price. This contract shall commence upon the date specified in the Contract or Purchase Order and shall remain in effect until such time as all items/services purchased in conjunction with this solicitation have been delivered and accepted by the City's authorized representative. It shall be understood and agreed that any warranty period which exceeds this term shall remain in full force for the duration of the warranty period.

2. NO OPTION TO RENEW FOR SUBSEQUENT YEARS

The prices or discounts quoted in this Solicitation shall prevail for one year from the effective date of the contract with no option to renew.

3. CONTENTS OF OFFER

Vendors are required to submit offers with the following conditions:

a. Vendors shall make all investigations necessary to inform themselves of the facilities affected by the delivery of products and services required by the Solicitation.
b. Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
c. The City shall issue Addenda if substantial changes are required which may impact the content and submission of Offers. A copy of such addenda will be publicly posted with the original RFP posting.

d. The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

4. CLARIFICATION AND MODIFICATIONS

The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Vendors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation.

5. ELIGIBILITY OF VENDORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED

Offers will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Vendors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a vendor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

6. CONFIDENTIAL DOCUMENTS

Vendors may designate specific pages or sections within their submission as trade secret or confidential commercial information or as otherwise protected by law ("Confidential Information"). Documents and data that are considered Confidential Information shall be clearly marked as such and separated from the rest of the solicitation submission documents. Comingling is not acceptable. The City does not favor blanket assertions of Confidential Information. Please note that blanket assertions that merely classify and/or broadly claim information is confidential are insufficient as a matter of law. *See, International Brotherhood of Electrical Workers Local 68 v. Denver Metropolitan Major League Baseball Stadium District,* 880 P.2d 160 (Colo.App. 1994). Any information that will be included in any resulting contract cannot be considered Confidential. Under no circumstances may submission pricing information be considered Confidential. In the event a formal contract is entered into with the City and a portion of the Proposal/Response carries a designation indicating the Vendor believes it is Confidential Information, then the City agrees that it will use its best efforts to forward any request for the disclosure of the Confidential Information to the Vendor. By its submission of the Proposal/Response ,Vendor agrees to promptly respond to the request for disclosure with any objections and reasons therefor in accordance with the Colorado Open Records Act C.R.S. §§24-72-101 *et seq.* and any other applicable law. Further, Vendor agrees to assume the obligation to defend, hold harmless, and indemnify the City in any legal proceeding that arises from non-disclosure of documents or data pursuant to the Vendor's objection.

7. MODIFICATIONS TO EXISTING CONTRACT

Terms and conditions may be added, modified, and deleted upon mutual agreement between authorized agents of the City and the vendor provided that such terms and conditions remain within the scope and original intent of the Solicitation. Said terms and conditions may include, but are not limited to, additions or deletions of service levels and/or commodities, and increases or decreases in the time limits for an existing contract. Any and all modifications must be signed by authorized agents of the City and the vendor prior to the enactment of such modifications.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected vendor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than $1,000,000 for bodily injury and property damage for each occurrence and not less than $2,000,000 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.

2. ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of $1,000,000 each accident/disease and $2,000,000 aggregate.

3. ☒ **Automobile Liability** for limits not less than $1,000,000 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.

4. ☐ **Umbrella Liability** of $, following form to the Commercial General Liability.

5. ☐ **Builders Risk or Course of Construction** Purchased by contractor to cover physical damage to property in construction or rehab. Contractors will ensure that City and subcontractors will be covered as additional insureds, excluding their own machinery, tools and equipment.

6. ☒ **Professional Liability** Professional Liability insurance in an amount of not less than $1,000,000 per occurrence, covering the professional work contemplated under this proposal. The coverage shall have an extended reporting period of three (3) years following the date of substantial completion of the work for reporting of claims.

7. ☐ **Pollution Legal Liability Insurance** for limits not less than $1,000,000 per occurrence (or claims made) and not less than $1,000,000 aggregate for bodily Injury, personal Injury and property Damage.

8. ☐ **Privacy/Network/Cyber Liability Insurance f**or limits not less than $1,000,000 for any firm providing product or services associated with IT, software, communication, or network.

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.

- Issuance of a Purchase Order/Contract is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the vendor fails to submit the required insurance documents within fifteen (15) calendar days after notice to submit such policies is given to the vendor by a City representative, the vendor may be in default of the Award.

- Except for Workers Compensation, Employer's Liability insurance, Automobile Liability and Professional Liability insurance, the City of Arvada must be endorsed as an additional insured on a Certificate of Insurance.

- All coverage must be written with carriers holding a minimum A.M. Best rating of A-:VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.

- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

ADMINISTRATIVE INFORMATION

1. PURPOSE - TO OBTAIN PROPOSALS

The purpose of this Solicitation is to provide qualified vendors with sufficient information regarding the City's needs in order to adequately prepare and submit a Proposal. Proposals must be received by the date and time established in this solicitation. Once the deadline has passed, Proposals will not be able to upload to the BidNet site. Proposals are proprietary working documents offered by prospective vendors and, as such, are not subject to public inspections until an official award is made.

2. PREPARATION AND SUBMISSION

Offers will be prepared as follow:

a. A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the extension of prices, the unit price shall prevail.
b. Vendors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.
c. Solicitations and addenda are available at WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda and communications.
d. Vendors who qualify their Offers by requiring alternate contractual terms and conditions as a stipulation for contract award, must include such alternate terms and conditions in its Offer. The City reserves the right to declare the vendor's Offer as non-responsive if any of these alternate terms and conditions are in conflict with the City's terms and conditions, or its best interest.
e. Once Offers have been opened, the City shall not consider any subsequent submissions of alternate terms and conditions.

3. MODIFICATION OR WITHDRAWAL OF OFFERS

Modifications to Offers- Changes to the Offer after the submission deadline shall be allowed only when the vendor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the vendor's name, address, Solicitation Number and title included.

Withdrawal of Offers- Offers may not be withdrawn after the deadline for the Solicitation for a period of ninety (90) calendar days. If an Offer is withdrawn by the vendor during this ninety (90) day period, the City may, at its option, suspend the vendor and may not accept any Offer from the vendor for a six (6) month period following the withdrawal.

4. REJECTION OF OFFERS

a. The City may reject an offer, in whole or in part, for reasons including, but not be limited to:
   i. The vendor misstates or conceals any material fact in its Proposal;
   ii. The vendor's Offer does not strictly conform to the law or requirements of the Solicitation;
   iii. The Offer expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
   iv. The Offer does not include documents which are required for submission with the Offer; or
   v. The Offer has not been executed by the vendor through an authorized signature.
b. The City may, at its sole and absolute discretion:
   i. Reject all or parts of Offers submitted by prospective vendors;
   ii. Re-advertise this Solicitation;
   iii. Postpone or cancel the Solicitation;
   iv. An Offer may not be accepted from, nor any contract be awarded to, any person or firm which
   (a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.

(b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
(c) has pending litigation against the City on the date and time that the Solicitation is due.

5. BEST VALUE AGENCY

The City of Arvada is a best value agency. Best value means a technique in a competitive solicitation process which emphasizes value over price and permits the evaluation of criteria such as, but not limited to, qualifications, experience, and performance data to determine the best overall value to the city. It is solely incumbent on the staff of the City of Arvada to conduct due diligence to determine best value prior to award.

6. METHOD OF AWARD - BEST EVALUATIVE SCORE BASED ON WRITTEN PROPOSAL:

The selection process will consist of evaluation of qualified proposals received based on the criteria outlined in this RFP. Presentations may be requested to confirm or clarify the information contained in the proposal responses. It is the intent of the City to award a contract to the vendor(s) who receives the highest score from the City's RFP Evaluation Committee.

The Committee will score written Proposals by reviewing documentation submitted by the vendors. Evaluation will be based on the following criteria:

Criteria	**Possible Points**
Comprehensive Proposal Approach	20
Proposal Indicates Project Understanding	20
Experience with Similar Projects	20
Schedule and Team Availability	15
Value of Bid Proposal's Cost	15
Value Engineering in Proposal	5
Performance Measures	5
Total	**100**

Exceptions to specifications or terms and conditions may result in submission being deemed non-responsive.

7. PRESENTATIONS

A second phase MAY be incorporated, in which the Committee will invite a limited number of vendors who received high scores during phase one, to provide an oral presentation. The evaluative score from the oral presentations will determine the top rated vendor(s).

8. PROPOSAL FORMAT REQUIREMENTS

Written proposal should include the information in the format outlined below and be limited to no more than twenty (20) pages. Required City forms, resumes, title page are excluded from page count. Information should be concise, without extraneous content. Refrain from submitting generic marketing materials, alternate and unapproved agreements, and any other information not requested.

All information should be contained in one pdf file, with sections bookmarked. The file name should start with proposer's name, then the proposal number. Imbedded links for required information are NOT acceptable. All information that proposers want evaluated must be contained in the pdf file.

- Cover & executive summary
- Detail Firm's and assigned staff capabilities, similar project experience, qualifications, licenses and certifications
- Details of proposal – proposed services, implementation timeline and project / project management approach as it applies to the Statement of Work
- Fee Schedule/Cost Proposal – cost for services and actions outlined in the Statement of Work
- Previous projects of similar size and scope, with references
- Completed attached City submittal forms and all other forms or attachments specifically requested

STATEMENT OF WORK

1. BACKGROUND:

The City of Arvada (COA) is requesting proposals from professional licensed engineering firms for the design of the Leyden Road (W82nd Ave) project ("project") from Indiana Street (State Highway 72) to Culebra Street. The assigned COA Project No. is 25-ST-20. The project will not be completed within one year; however, the intent is for the contract period to cover the length of the project.

Leyden Road is an east-west corridor for the COA's transportation network serving 11,000 daily vehicles trips. It provides connectivity to major north-south corridors including State Highways 72 and 93 which provide access to Golden, Boulder, and other Front Range cities.

This project will include work on Leyden Road between Culebra Street and Indiana Street and is to be designed per the COA Standards and Specifications. The main goal of the project is to reconstruct the section between Orion Way and Indiana Street to the COA Standards Collector cross section, or similar. The current design funding for the project was collected from development agreement fees from the Leyden Ranch and Leyden Rock developments to fund improvements to Leyden Road. The existing alignment is recognized by citizens as a safety concern for egress in case of wildfire and as lacking pedestrian facilities for bike and pedestrian travel, particularly for school aged children attending Ralston Valley High School, located east of Indiana Street.

The work shall follow the latest editions of Colorado Department of Transportation's (CDOT) Roadway and Bridge Design Manuals and Standard Specifications for Road and Bridge Construction, PROWAG: Accessibility Guidelines, AASHTO: A Policy on Geometric Design of Highways and Streets, AASHTO: Roadside Design Guide, and other requirements determined by the COA.

2. SCOPE:

The project will consist of all work required for the final design of Leyden Road from Indiana Street (SH72) to Culebra Street which will follow the latest version of the COA Standards and Specifications for the documents listed below:

- Construction drawings
- Project special provisions
- Bidding documents
- Cost estimates
- Applicable roadway design reports (drainage, SWMP, etc.)

The work shall also include Right-of-Way (ROW) negotiation, acquisition and preparation of ROW plans and legal descriptions for the widening portions of the project. A portion of the project between Orion Way and W82nd Place will require annexation from Jefferson County and will require preparation of annexation documents.

The Leyden Road widening scope between Indiana Street and Orion Way shall include:

- Two travel lanes, bike facilities, curb/gutter, a striped median, and sidewalks or a multiuse trail. The desired cross section will be most similar to the Collector cross section in COA standards.
- The Project scope in this area may be limited due to existing topography, utilities, and other site constraints. The Consultant shall vet and value engineer the proposed cross section in the Project Initiation and Concept phase to allow for the most efficient and cost-effective design given these constraints. Existing overhead electric is expected be undergrounded as part of this project.
- The anticipated eastern end point of the project is Indiana Street (State Highway 93). Indiana Street is expected to be widened to two lanes in either direction, acceleration, and deceleration lanes in the future. However, there is currently no estimated timeline for the Indiana Street widening project to be studied, designed, or constructed. For this project the COA would like the Leyden Road design to include space for these future improvements and have a temporary design in place to limit future acquisition and work on Leyden Road caused by the Indiana Street widening. The COA would also like to limit the impact to the Indiana and 80th intersection to the maximum extents practicable for this project.

- Consultant to provide detailed traffic control plans for COA and AFD approval. Leyden Road is the main egress route in case of emergency. If Leyden Road is completely shut to traffic during construction a detailed egress and traffic control proposal will be required for emergency vehicle ingress and evacuation egress.

The scope between Culebra and Orion Way shall include analysis and design of the following:

- Proposed pedestrian crosswalk and ramp at Yule Way crossing Leyden Road allowing access to the Pattridge Open Space. Consultant to evaluate the installation of a rectangular rapid flashing beacon (RRFB), or similar, at this location.
- Concept plans for a RRFB crossing of Leyden Road at Culebra Street to the Pattridge Open Space trail. This will require concept plans from the Leyden Road crosswalk to the trail which will include a pedestrian bridge crossing Leyden Creek. Grading plans can rely on other topographic resources that does not require detailed survey for the concept phase.
- Plans for removal of Leyden Road landscape islands (6) to be replaced with pavement section. The purpose of the landscape islands removal is to provide a consistent 30' wide pavement section per the Emergency Preparedness Study (included in attachments) for 2 eastbound lanes of emergency egress. Plans shall also evaluate the need for traffic calming devices for speed reduction and pedestrian safety due to the removal.
- Mill and overlay plans from Leyden Rock Drive to Orion Way. These plans will only be included in the plan set if the 30% design schedule aligns with the Pavement team's desired repaving schedule west of Orion Way. Please break out these plans as a separate item in the itemized proposal cost.

The COA has completed Preliminary Geotechnical and Environmental Reports which are attached to the RFP. Further geotechnical boreholes will be completed for anticipated retaining walls when the Design is at 60% design. The COA has a geotechnical engineer under contract for the geotechnical work and will keep the Contract with them for the remainder of the Project. Chosen consultant will be expected to work with the hired geotechnical engineer for any further explorations or information required.

General information and scope of services for the project is expanded on below. They are a general outline of the tasks, at minimum, that are to be a part of the scope of work. In the proposal, the Consultant shall provide a detailed scope of work and schedule. The Consultant is expected to evaluate staffing needs and determine design tasks that can be completed concurrently to streamline the design schedule. All proposals shall include the minimum required tasks below.

<u>Task 1 – Project Management, Coordination, and Meetings</u>
This task is in support of the COA's Project Manager with the management of this Project from Concept to Final Design.

Task Description -

- Coordinate project tasks, including project meetings, with COA's Project Manager, and other COA personnel and departments as required.
- Review sub-consultant invoices; prepare and submit monthly invoices and progress reports. Invoices must meet the COA's format and requirements.
- Develop and maintain a detailed Critical Path Method (CPM) project baseline schedule; update monthly and include with monthly invoice.
- Attend project management meetings, consultant team coordination meetings and outside agency coordination meetings. Expected coordination meetings
- Prepare and submit a QA/QC plan and adhere to the process throughout the project.
- Schedule regular bi-weekly project coordination meetings.
- Prepare agendas, exhibits, and handouts for bi-weekly meetings. Prepare meeting minutes to be completed and distributed within 7 days of each meeting.
- Manage and coordinate work efforts of the Consultant Team.
- Public Outreach included in this Task if an area of design has multiple options and public engagement could be utilized to improve the design.

<u>Task 2 – Project Initiation, Kickoff, and Concept Plans</u>
This Task shall include Concept Plans and Memorandum for the Scope above. The Task includes research of

existing information, as-builts, reports/studies, and COA files to draft concept plans for COA review and approval. Hired consultant to present alternatives that require further analyses and value engineering at this Task.

This task is in support of the COA's Project Manager with the management of this Project's kickoff.
Task Description -

- Coordinate project tasks, including project kickoff meetings, with COA's Project Manager, and other COA personnel and departments as required. Will require kickoff with outside agencies as well including but not limited to: Jefferson County, Tucker Ditch, Church Ditch, and CDOT.
- The plans shall include cover sheet and notes, concept plan and profiles, and typical sections with appropriate callouts. Concept grading shall be included showing estimated grading and construction limits.

Task 3 – Data Acquisition and Survey

This task includes field survey and related services as needed to complete the design of the project, including survey for road widening elements, ROW acquisition and annexation, and other survey work will be necessary.

Preliminary survey for the project has been completed by COA and includes preliminary information below:

- Subdivision Plats, Property Deeds, Recorded Land Surveys, Recorded ROW documents from Jeffco Clerk and Recorder. No title commitment has been completed for any parcels; no easement research has been completed.
- Project Control Diagram including Control Points and found Aliqout points.
- AutoCAD DWG in project control with surveyed utility data, fence lines, found monuments, unadjusted cogo data tied to found aliquot monuments with associated deed and ownership data per Jeffco Clerk and Recorders office.
- Ortho mosaic from drone flight in project control.
- SUE utility locates per latest industry standard.

Task 4: ROW Annexation and Acquisition and ROW Plans Preparation

This task shall include the engagement of professional ROW services for the appraisal, negotiation, and acquisition of ROW and easements necessary for the project. All activities shall be performed in conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Work to include, but not be limited to, coordination with COA Project Engineer, Consultant, appraiser, and affected property owners, performing appraisals or value findings in accordance with the COA requirements, review of legal descriptions and appraisals, preparing offer letters and other necessary correspondence with property owners, conducting negotiations with each owner, coordinate and attend real estate closings, and litigation support, if necessary.

The project includes a stretch of Leyden Road located within Jefferson County ROW between Orion Way and West 82nd Place. This task includes annexation support for COA for all of the coordination and documents listed for ROW acquisition and more, if necessary.

The Consultant shall prepare ROW plans and legal descriptions and exhibits. The ROW plan sheets shall include, but not be limited to: Title Sheet, Tabulation of Properties, Survey Control Diagram, and ROW Plan Sheets. Legal descriptions and exhibits shall be prepared for fee simple acquisitions, permanent easements and temporary construction easements. The Consultant shall make revisions to the ROW plans as needed throughout the appraisal and negotiation process for those changes approved by the COA.

The proposed ROW line, permanent and temporary easements and existing ROW lines shall be staked.

Task 5: Title Insurance and Closing Services

For this task, a Title Company shall be contracted to provide title insurance in the amount of the value of the parcel being acquired. Title insurance will not be necessary for certain easements where, at the discretion of the COA, it is determined that it is not cost effective to purchase the title insurance. However, in all cases a title commitment, with copies of all conveyance documents, shall be furnished to the COA along with a 5-year history of all changes in ownership to the property. The Title Company shall also provide automatic updates of any change in ownership during the acquisition process up to the date of closing.

The Title Company shall arrange for all necessary closings, and all related activities, including, but not limited to, escrow services, update title commitments as to the amount to be insured, satisfaction of liens, calculate final settlement figures and prepare all closing documents, except deeds, per instructions from COA staff. The Title Company shall disburse settlement funds as applicable and assist in recording title documents and issue a 1099-S to the property owner and the Internal Revenue Service (IRS) in accordance with Federal Law.

Task 6: Preliminary Design (Minimum 30% Design)

For this task the Consultant should complete roadway design that includes storm drainage and water quality analysis (preliminary drainage report) and utility design and coordination. The design shall be advanced enough such that ROW (fee simple, permanent, and temporary easements) limits can be determined. The design shall also be advanced enough that further geotechnical or environmental investigations needed for design are identified and kicked off following this Task. The preliminary design plan set shall include a cost estimate and plans, but is not limited to the following drawings:

- Title Sheet
- General Notes
- Typical Sections
- Roadway Plan and Profile
- Grading, Drainage, and Utility Plans
- Wall Design
- Landscape Plans
- Construction Phasing Plan
- Ownership Map
- Cross Sections

Consultant will be responsible for determining any additional submittal documentation necessary and provide that as part of their proposal.

Task 7: 60% Roadway Design

Based on COA comments provided following the 30% submittal review, prepare construction drawings, engineer's cost estimates, project special provisions, standard special provisions, and technical reports. A SWMP plan per the City's templated is expected beginning at this submittal. The 60% plan drawings shall include construction drawings similar to the Final Design.

Task 8: 90% Roadway Design

Based on previous comments received following the 60% submittal review, prepare construction drawings, engineer's cost estimates, project special provisions, standard special provisions, and technical reports. The 90% plan drawings shall include, but not limited to, those listed in Task 9.

Task 9: Final Design

This task will prepare final construction drawings, bidding documents, project special provisions, and final cost estimate. Note that the Consultant shall obtain or assist the COA with obtaining approvals from utility companies (Xcel, Comcast, etc) and irrigation ditch companies, as needed. The final construction drawings shall, at a minimum, include the following:

- Title Sheet
- General Notes
- Typical Sections
- Summary of Approximate Quantities
- Tabulations
- Removal and Resets Plans
- Erosion Control Plans
- Roadway and Intersection Plans
- Roadway Profiles
- Tabulations of Storm Sewers and Utilities
- Drainage and Utilities Plans
- Drainage and Utility Profiles

- Stormwater Management Plan
- Grading Plans
- Suggested Construction Phasing
- Structure (Retaining Wall) Plans
- Summary of Traffic Items, Tabulation of signs
- Traffic Control Plans
- Pavement Marking Tabulation
- Existing Striping
- Final Signing and Striping
- Construction Phasing Signing
- ROW Plans
- Roadway Cross Sections
- Hardscape Plans
- Landscape Plans
- Irrigation Plans, if applicable
- Lighting Plans

Consultant will be responsible for determining any additional submittal documentation necessary and providing that as part of their proposal. This can include any value engineering options

REQUIRED VENDOR SUBMITTAL FORM

SUBMITTED BY:

Company Name: _____

Contact Names: Sales/Customer Service _____

Address: _____

Phone: (_____) _____ Email(s): _____

The undersigned hereby affirms that:

- They are a duly authorized agent of the vendor;
- They have read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accepts and acknowledges this offer is consistent with the specifications and terms and conditions, unless specific variations have been clearly and expressly listed in the offer.
- The Offer is in all respects fair, without outside collusion or otherwise illegal action.

By:_____ _____ _____
Signature of Authorized Agent Date FEIN

_____ _____ _____
Typed/Printed Name of Agent Title of Agent Agent email

Type of Business: Corporation, State of Incorporation _____ Partnership (general)
Partnership (limited) Sole Proprietorship Limited Liability Company Other _____

Address of main business office, principal factory, or warehouse if different from above:

_____

Principal line of business: _____

Number of years in present business: _____

REFERENCES:

☐ Check here if Firm's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

References continued:

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

PAYMENT TERMS: If the vendor does not accept a percentage discount, the City standard is net thirty (30) days after the date that the City receives an accurate invoice and has accepted the product or service. Payment is the date of the check mailing or date of the credit card transaction.

Discount: ____% ____ Days, Net: 30___ Days, Accept Visa without additional fee? _____

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below, unless otherwise directed in Administrative Information, with each section clearly identified. **Missing information or required documents may result in submission being deemed non-responsive.**

- ☐ Submit **one** pdf document, unless instructed to include Excel file of Bid Schedule, on-line at BidnetDirect.com (File Name: Company name – Solicitation number)
  - ☐ Cover & Executive Summary
  - ☐ Detail Firm's and employees' Capabilities, Experience, Licensing, and Certifications
  - ☐ Details of Proposal – Proposed products & services, implementation timeline and warrantees
  - ☐ Fee Schedule/Cost Proposal
  - ☐ Previous projects of similar size and scope, with references
  - ☐ Completed signed Required Vendor Submittal Form, Performance Measures Forms and any other attachments requested.
  - ☐ Attach Firm's licensing or certifications

CONFIRM:

- ☐ CONFIDENTIAL information, if any, MUST be stamped as such on each page and submitted separately.
- ☐ VARIATIONS: Checking this box indicates that the vendor has variations to this solicitation. Identify all variations and exceptions to this solicitation on a separate sheet/s of paper. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation. For each variation listed, reference the applicable section of the solicitation document, the page number, and the variance. Submittal of a Vendor Contract is considered excessive in Variations and may be cause for determining that the Bid/Offer is non-responsive and ineligible for award.
- ☐ Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable unless listed as a variation.
- ☐ Initial to acknowledge receipt of Addenda, if any:

  #1 _____ #2 _____ #3 _____

VENDOR NAME:_____ **SOLICITATION # 26-ENG-001**

Design Services Leyden Road Improvements

PERFORMANCE MEASURES FORM INSTRUCTIONS:

The City has incorporated Performance Management into its organizational culture. When vendors submit offers to the City in response to solicitations for ***Services*** (not associated with the primary purchase of goods, supplies, or software), they shall identify the methods and goals by which the City will monitor and report on the Vendor's performance providing those services to the City. Vendor's performance shall be documented as to (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation.

1. Vendor will define 1-2 measures for (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation, that follow S.M.A.R.T goals: Specific, Measurable, Achievable, Relevant, and Timely, per category.
2. The awarded vendor will be evaluated by the City per these defined metrics 2 months prior to contract renewal.
The department will review with the vendor any measures needing improvement.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than $15,000.

(a) Price/Cost

Example Measure: Consultant will submit detailed invoices substantiating amounts requested.

1. _____
2. _____

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant's Project Manager.

1. _____
2. _____

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

1. _____
2. _____

(d) Sustainability and/or Innovation

Example Measure: Digital reports delivered to the City 95% of the time will to reduce the use of paper.

1. _____
2. _____

Performance measures will be queried for every year of the contract. Performance measures reporting will be considered when renewing or awarding a contract with a vendor.

CITY OF ARVADA
PURCHASING DIVISION
FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869
PHONE: 720-898-7099

REQUEST FOR PROPOSAL- ADDENDUM No. 1

Proposal #:	26-ENG-002
Title:	Design Services – Leyden Road Improvements
RFP Issued:	12/19/2025
Addendum #:	**1**
Today's Date:	01/23/2026
Proposals Due By:	02/05/2026 **2:00 PM** MDT (EXTENDED)
Questions Deadline:	01/20/2026 **2:00 PM** MDT (NO FURTHER QUESTIONS)

Solicitation and all related addenda and communications are available at WWW.BIDNETDIRECT.COM

The following clarifications are provided to be incorporated into the Request for Proposals
All other information shall remain unchanged.

1. **Pre-Proposal Meeting Agenda**
2. **Attendance Sheet from Pre-Proposal Meeting**
3. **Questions/Answers**
4. **The due date for proposals is being extended until Thursday, February 5, 2026, 2:00PM MT.**

26-ENG-002 Leyden Road Improvements

Jan 14, 2026

10:00 am

Zoom

Name:	**Organization**	**Title**
Brian Lavey	City of Arvada	Civil Engineer III - Transportation
Doreen Mazza	City of Arvada	Procurement Specialist

1. Introductions
    a. Attendees: **Please provide your name, company name, email, and phone number in the chat.**
2. Proposal Schedule
    a. Proposals due ~~February 3, 2026 at 2:00 pm via BidNet~~ extended to February 5, 2026 at 2:00 PM MT per Addendum No 1
    b. Questions must be submitted via BidNet. The last day for questions is January 20, 2026 at 2:00 PM. .
    c. Addendum will be issued and will include, at a minimum, the sign-in sheet for this meeting and this agenda and the answers to the questions that are submitted through Bidnet..
3. Project Summary
    a. Project locations
        i. Leyden Road - Indiana Street to Orion Way
        ii. Leyden Road - Orion Way to Culebra Street
        iii. Pattridge Open Space
    b. Major items of work
        i. Road Widening Design
        ii. ROW Acquisition
        iii. Utilities Design (Stormwater, Underground Electric, etc)
        iv. Structural Design
4. Questions

PRE-PROPOSAL MEETING ATTENDANCE SHEET

Bid # 26-ENG-002 Design Services Leyden Road Improvements	**Meeting Date/Time: 01/14/2026 10:00 AM**
Facilitator: Brian Lavey	**Place: VIRTUAL**

Company	Representative Name	E-Mail
Huitt-Zollars	Rob Reece	rreece@huitt-zollars.com
Enertia Consulting Group	Rick Hagamayer	Rick.hagamayer@enertiacg.com
HG Consult	Kristi Garrison	kgarrison@cons.com
Olsson	Lee Kunselman	lkunselman@olsson.com
Topographic Co	Chet Smith	Chet.smith@topographic.com
JR Engineering	Daren Sterling	
JMT Engineering	Michelle Wiesner	
Muller Engineering Compnay	Carlos Sala	csala@mullereng.com
Stantec	Tracy Lawless	
Huitt-Zollars	Alex Bush	
Rocksol	Rudy Parks	parks@rocksol.com
Pinnacle Group	Sean Harrison	
JMT	Tony DeVito	tdevito@jmt.com
Tensar	Ryan Austin	Ryan.austin@cmc.com

Company	Representative Name	E-Mail
Volkert	Angy Casamento	angy.casamento@volkert.com
Drexel Barrell & Co	Gary Grembowiec	ggrembowiec@drexelbarrell.com
JMT	Leela Rajasekar	lrajasekar@jmt.com
Parcel2Permit Consulting	Courtney Wallace	courtney@parcel2permit.com
Mead & Hunt	Molly North	Molly.north@meadhunt.com
ICON Engineering	Craig Jacobson	cjacobson@iconeng.com
Felsburg Holt & Ullevig	Jeanne Schley	Jeanne.schley@fhueng.com
SiteWise (Hydrovac)	Zac Craig	Zac.craig@sitewisellc.com
Goodbee & Associates	Mary Keith Floyd	mk@goodbeeassoc.com
ICON Engineering	Taylor Domin	tdomin@iconeng.com
WSB	Shawn Poe	Shawn.poe@wsbemg.com

Questions & Answers - 1

Solicitation 26-ENG-002 - Design Services - Leyden Road Improvements
Buying Organization City of Arvada

No	Question/Answer	Question Date
Q1	**Question: Street Lighting** What is the expectation for street lighting? Will the consultant be designing the entire system, or providing locations for Xcel to design from? **Answer:** Street lighting is expected for the project and within project scope between Orion Way and Indiana Street. Consultant anticipated to design the system.	01/07/2026
Q2	**Question: ROW/Easement Acquisition** How many parcels should the consultant anticipate for the ROW/Easement Acquisition? **Answer:** From Orion Way to Indiana Street there are seven parcels on the southside of Leyden Road that may be impacted by the widening and thus requiring ROW/easement acquistion. Five are privately owned, one is owned by Church Ditch Waer Authority and another by the City. On the northside there are eight parcels that may be impacted by the widening. These parcel owners include Leyden Ranch HOA (3 parcels), Xcel (1), Jeffco (1), and private owners (3). Please also note the Jefferson County annexation of ROW required in this stretch.	01/07/2026
Q3	**Question: Utility Locate Test Holes** How many Utility Locate Test Holes should the consultant anticipate for our fee proposal? **Answer:** Assume and include a minimum of 10 in the proposal. Please include a unit cost for additional Test Holes if more are needed.	01/07/2026
Q4	**Question: Landscaping and Hardscaping** The proposal briefly mentions removing some median landscaping, but it does not indicate any other requirements. Please expand on what you are looking for regarding the Landscaping and Hardscaping. **Answer:** The existing median landscaping would be removed and replaced with asphalt to provide for a consistent 30' wide paved section for emergency egress and ingress in wildfire situations. The existing medians don't allow a consistent 30' section that would provide a uniform exit pattern.	01/07/2026
Q5	**Question: 11x17 Pages** Will the City allow 11x17 pages for the schedule and exhibits? **Answer:** The City will allow 11x17 for schedule and project concept exhibits. No 11x17s are allowed to discuss project scope, teams, etc. The schedule and concept exhibit 11x17 sheets will count as 1 sheet.	01/12/2026
Q6	**Question: Section Dividers** The City excluded a cover page in the page count. Will the City allow graphical section dividers to also be excluded from the page count? **Answer:** Dividers count in sheet count.	01/12/2026

No	Question/Answer	Question Date
Q7	**Question: Landscape and Irrigation** The RFP states that landscape and irrigation plans should be included within the final design deliverables. Since there will not be raised medians on the project, should landscape and irrigation plans be included in the scope of work? **Answer:** Correct that proposed landscape and irrigation plans are not anticipated at this time. However please note that the landscape and irrigation removals at the islands being removed are anticipated and should be a part of those demo plans.	01/12/2026
Q8	**Question: Lighting Plans** The RFP states that lighting plans should be included within the final design deliverables. Please confirm that street lighting design should be included in the scope of work. **Answer:** Refer to Question and Answer #1.	01/12/2026
Q9	**Question: Survey and Utility Scope** What level of topographic survey and utility investigation is anticipated to be required by the consultant as part of Task 3, since the City has previously completed some of this work? **Answer:** See Question 3 for utility investigations. Topo survey was completed along the Leyden Road alignment every 100' and utilities were shot from Indiana Street to Orion Way. The anticipated additional survey will be to the extents the concept plans will require for final design.	01/12/2026
Q10	**Question: ROW Acquisitions** For cost estimating purposes, can the City provide a number for the anticipated number of ROW acquisitions, permanent easements, and temporary construction easements? **Answer:** Refer to Question and Answer #2.	01/12/2026
Q11	**Question: Irrigation Ditch** Who controls/owns the irrigation ditch that parallels Leyden Rd? **Answer:** Church Ditch Water Authority.	01/13/2026
Q12	**Question: Pedestrian Bridge** What type of pedestrian bridge design are you looking for? Prefabricated or designed from scratch? **Answer:** Prefabricated would be preferred due to design cost. Please note the pedestrian bridge over Leyden Creek is not being designed as part of this scope. The Culebra to Pattridge Open Space plans are concept only within this SOW.	01/13/2026
Q13	**Question: Utility Test Holes** How many utility test holes should we use for our fees? **Answer:** Refer to Question and Answer #3.	01/13/2026
Q14	**Question: Scope page 9** On Page 9 – 2. Scope – in the third bullet under “The Leyden Road widening scope…” is “State Highway 93” supposed to be “State Highway 72”? **Answer:** Yes, State Highway 72	01/13/2026

No	Question/Answer	Question Date
Q15	**Question: AFD acronym** On Page 10 in the first bullet is “AFD” an acronym for Arvada Fire Department? **Answer:** Yes, "AFD" is an acronym for Arvada Fire Department.	01/13/2026
Q16	**Question: RRFB Crossing** •If the RRFB crossing of Leyden Road at Culebra Street, and associated pedestrian bridge over Leyden Creek conceptual design shows the crossing and bridge can be built based on the available construction budget will this be added to preliminary and final design via a contract amendment? Should the concept plans include a construction opinion of probable cost? **Answer:** It is possible but not guaranteed the chosen firm would be utilized for the preliminary and final design if the concept is advanced to construction. If that were to happen it would be a contract amendment. Yes, the concept plans should include a construction opinion of probable cost.	01/13/2026
Q17	**Question: Environmental** Will the City require additional environmental testing? If so, will this be completed by Terracon (w/Vine) in association with further Geotechnical investigation for the design of the proposed retaining walls? **Answer:** No further environmental testing is anticipated at this time. If additional environmental investigations are required the City will either utilize an on-call consultant or work with the chosen firm for an amendment to the contract.	01/13/2026
Q18	**Question: Concept Plans** On Page 10 under Task 2 – Project Initiation, Kickoff, and Concept Plans, can the concept plans be completed with an aerial background? If so, will the City provide the aerial (from their GIS information) or should the Consultant include obtaining the aerial in the proposed fee? **Answer:** The concept plans will utilize the completed survey which include aerials.	01/13/2026
Q19	**Question: Ditch Owners** Has there been any discussions by the City with the Tucker and Church Ditch owners/operators regarding this project? **Answer:** Church Ditch is aware of the project but no further discussions beyond project introduction.	01/13/2026
Q20	**Question: AutoCAD files** Can the AutoCAD files mentioned on Page 10 under Data Acquisition and Survey be made available to the proposers? Are the drone photos available in an aerial drawing format? **Answer:** At this time we can not share the existing survey. It will be provided to the chosen firm when the Intent to Award is issued. Drone photos will be provided to the chosen firm when the Intent to Award is issued.	01/13/2026
Q21	**Question: Survey Requirement** Will the City complete any further required survey? Or will the consultant need to add a survey sub to their teams. **Answer:** Consultant to add survey sub to their team. Additional supplemental survey expected for design.	01/13/2026

No	Question/Answer	Question Date
Q22	**Question: SUE sub or QLA** Will the consultant team require a SUE sub, or will QLA be completed by a consultant on a different City contract? **Answer:** Consultant team to include SUE sub.	01/13/2026
Q23	**Question: Title Insurance** On Page 11 for Task 5 Title Insurance and Closing Services, should this be included as an “additional service” section of the fee proposal because it will be dependent upon design and the resulting numbers of acquisitions be it be permanent easements, temporary easements, or acquisitions to dedicate as ROW. Or should we include in our fee an estimated cost for the title insurance, title commitments assistance, and all other tasks described with the caveat that the cost of all the tasks listed under Task 5 may be higher, because of the many unknowns at this time, then what is included in the consultant’s fee proposal. **Answer:** Please See Question and Answer #2 for anticipated parcels impacted by the widening from Orion Way to Indiana Street. Please include estimated cost and the City understands the cost may be lower/higher depending on the design and will work with the chosen firm on the plus/minus as design advances.	01/13/2026
Q24	**Question: Preliminary Design** On Page 12 for Task 6 Preliminary Design, is it expected the pedestrian crossing at Culebra Street is taken to 30% design, as well as the connection to the Leyden trail and bridge over Leyden Creek? **Answer:** Please do not include any design costs for these items past concept. See Queston and Answer #16 for more information.	01/13/2026
Q25	**Question: Pedestrian Crossing** On Page 12 for Tasks 8 and 9 will the pedestrian crossing at Culebra Street, as well as the connection to the Leyden trail and bridge over Leyden Creek included in 60% and 90% design. **Answer:** Please do not include any design costs for these items past concept. See Queston and Answer #16 for more information.	01/13/2026
Q26	**Question: Page Count** Would 11"x17" page size be allowed? If so, would they count as 1 or 2 pages? **Answer:** Please See Questoin and Answer # 5.	01/13/2026
Q27	**Question: Geotechnical** Will the City's Geotechnical Engineer provide the geotech for the pedestrian bridge, and the retaining walls? **Answer:** Assuming this is for the Leyden Creek pedestrian bridge south of Culebra therehas been no geotech done for this location and won't be prior to concept design.	01/14/2026
Q28	**Question: Accessibility** Please confirm that your reference to accessibility requirements in the RFP is only for content that will be public facing on the website throughout the project. **Answer:** Yes, section 26 applies to public facing support documents that will be posted on the website or distributed digtially.	01/19/2026

No	Question/Answer	Question Date
Q29	**Question: Geotech Sub** The City has contracted with a geotechnical engineering firm and the Selected Consultant is required to work with them. What is their scope with the City? Are they only doing soils investigations and reports or will they give recommendations/assist on retaining wall designs? What about materials engineering? Who is the geotech? **Answer:** Their scope is final report and recommendations which include retaining wall recommendations. If additional geotechnical items needed as design advances the chosen firm will work with the City and geotechnical engineer to address. Their scope includes retaining wall recommendations and can assist design but are not contracted for structural engineering. Their scope includes pavement recommendations. Rocksol Consulting Group.	01/19/2026
Q30	**Question: Landscape Architecture** Your scope mentions Landscape Architecture plans. Where in the project will that be anticipated? **Answer:** Refer to Question and Answer #7.	01/19/2026
Q31	**Question: Lighting Plans** The scope mentions Lighting Plans, are you anticipating needing lighting and electrical support? **Answer:** Refer to Question and Answer #1.	01/19/2026
Q32	**Question: Final Design** Task 9 Final Design includes Lighting Plans as part of the construction drawings, however lighting is not mentioned in any parts of the proposal. Will there indeed be lighting added along the corridor? If so, will it extend the entire project corridor, or will the lighting only be implemented from Culebra to Orian? **Answer:** Refer to Question and Answer #1.	01/19/2026
Q33	**Question: Conceptual Design** Conceptual design for the pedestrian/bike crossing and a bridge spanning Leyden Creek is mentioned in the RFP. Is it expected final design of these two items + the required connection to the Leyden Trail, be included in the construction contract documents? **Answer:** Please do not include any design costs for these items past concept. Refer to Question and Answer #16 for more information.	01/19/2026
Q34	**Question: Question concerning 11x17 Pages in the Submittal** Please clarify whether an 11” x 17” page is permitted as part of the submission. If allowed, will the 11” x 17” sheet be counted as one page or as two pages for the purposes of the page limit? **Answer:** Refer to Question and Answer #5.	01/20/2026
Q35	**Question: Existing Survey** Would the City be willing to provide the existing survey? **Answer:** At this time we can not share the existing survey. It will be provided to the chosen firm when the Intent to Award is issued.	01/20/2026
Q36	**Question: 11x17 sized pages** May we use 11x17 pages in our response and would they count as 1 page or 2 pages? **Answer:** Refer to the Question and Answer #5.	01/20/2026

No	Question/Answer	Question Date
Q37	**Question: Parcels acquisition** How many parcels does the City anticipate acquiring? **Answer:** Refer to the Question and Answer #2.	01/20/2026
Q38	**Question: Emergency Preparedness Study** Will the previously completed emergency preparedness study be attached? **Answer:** The emergency preparedness study in its entirety will be given to the chosen firm. The relevant sections of the study that apply to Leyden Road are attached to the RFP.	01/23/2026

Exhibit B

AN AGREEMENT BETWEEN THE CITY OF ARVADA AND OLSSON, INC. FOR DESIGN SERVICES RELATING TO THE LEYDEN ROAD IMPROVEMENTS IN AN AMOUNT NOT TO EXCEED $899,738.00 IN THE FIRST YEAR

PROPOSAL FOR DESIGN SERVICES

LEYDEN ROAD IMPROVEMENTS

CITY OF ARVADA

FEBRUARY 5, 2026





olsson®

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February 5, 2026
City of Arvada
8101 Ralston Road
Arvada, CO 80002

RE: 26-ENG-002 Design Services Leyden Road Improvements

Dear members of the selection committee,

The City of Arvada's commitment to improving quality of life—whether through safer streets, environmental stewardship, or long term preparedness and resilience—shapes the way this community grows. As Arvada continues to serve as a key connector across the Front Range, your focus on thoughtful, future ready infrastructure makes this project especially meaningful, and we're eager to help advance that vision.

BUILDING RESILIENCE AND CONNECTIVITY

Many members of our staff live, work, and volunteer in Arvada and the surrounding communities, which provides us with firsthand insight into the ways thoughtful design can shape long-term mobility, safety, resiliency, and quality of life. Improving east–west emergency access on Leyden Road is vital for safer evacuations and greater preparedness in emergencies, especially where alternate routes are limited. Improving access to Leyden Rock, Pattridge Open Space, and destinations further east and west supports diverse transportation options and regional connectivity. The design will reserve space for future upgrades at Leyden and Indiana, supporting anticipated widening and ongoing community development. Our approach ensures that the infrastructure is adaptable and responsive to evolving transportation needs.

LOCALLY-LED, EXPERT-DRIVEN PROJECT DELIVERY

The Olsson team provides comprehensive full-service support throughout all stages of the project. We prioritize quality and responsiveness to ensure each project progresses efficiently and delivers value to the community.

As our team members are locally situated, we are able to address emerging needs efficiently, maintain effective collaboration with City staff, and provide consistent support for the duration of the project. Our project team is structured on a proven framework of multidisciplinary collaboration, demonstrated by the successful delivery of more than 15 comparable infrastructure projects in conjunction with our subconsultant partners.

DELIVERING SMART, COST-EFFECTIVE SOLUTIONS

Value engineering is a fundamental aspect of our project approach. High-quality design and cost awareness go hand in hand to achieve better results. Our team routinely assesses new and innovative design alternatives, materials, and construction methods to identify opportunities that minimize costs, streamline maintenance, enhance user experience, and improve long-term performance.

The Olsson team is committed to providing the best value through a systematic value engineering process, which is rooted in collaboration and creative problem-solving. By partnering two leading firms, we develop solutions that provide both efficiency and long-term value for the project.

We appreciate the opportunity to partner with the City of Arvada on a project that will meaningfully improve safety and mobility for the community we call home. We look forward to the chance to discuss our approach further and demonstrate how our local experience, full service capabilities, and commitment to value driven design make us a strong fit for this effort. Thank you for your consideration.

Sincerely,

Lee Kunselman, P.E., PMP
Project Manager

Jessica Burch, P.E.
Principal in Charge

1525 N. Raleigh Street / Suite 400 / Denver, CO 80204 / Phone: 303.237.2072 / Fax: 303.237.2659 **/ olsson.com**



FIRM'S ASSIGNED STAFF CAPABILITIES

We Are Olsson.

We are a full-service engineering team with extensive experience improving transportation across Colorado's Front Range. Our locally invested staff design safer, more resilient roadways for both daily use and emergencies like wildfire evacuations.

With nearly 200 Colorado-based Olsson staff members ready to serve, the City gains access to an unparalleled pool of local expertise. Our project manager, located just 20 minutes from the project site in Denver, stands ready to respond promptly - whether for critical meetings or on-site needs - ensuring seamless communication and swift decision-making every step of the way.

Our local reputation for reliability and flexibility has made us a go-to transportation consultant for many entities across the state, including Douglas County; the Cities of Colorado Springs, Fort Collins, Greeley, Lakewood, and Wheat Ridge; the Towns of Castle Rock and Windsor; and special districts like Castle Pines Metro District.

What Our Clients Say.

"Olsson's emphasis on collaboration makes it so I can be more hands-off with my projects... In particular, I appreciate the team's willingness to keep hierarchies minimal and encourage direct communication between designers and myself." - Sean Owens, Douglas County

"Olsson gave us designs that were sensitive to potential project impacts, mitigated effects on landowners, reduced right-of-way, and navigated difficult design challenges, all while keeping our project vision in mind." - Omar Herrera, Town of Windsor

"Olsson's performance stands out among consultants. In my experience, they are the best I have worked with - making complex projects straightforward and stress-free." - Dan Klenjoski, City of Wheat Ridge



Your Project Manager

LEE KUNSELMAN, P.E., PMP

Lee has over 15 years of Project Management experience, specializing in delivering transportation infrastructure projects for public sector clients. With over 25 years planning, designing, delivering and managing transportation projects, he focuses on building strong teams and a structured yet inclusive approach to attaining client goals. Lee has played key roles on a wide range of projects across Colorado, including Pike Road Improvements for the City of Longmont that added roadway capacity, multimodal connectivity, and improved ADA pedestrian movements at intersections. Lee's expertise and passion is guiding teams through complex transportation challenges that provide municipalities with outcomes that fit their financial constraints.

Lee will lean on his design background in emergency response, arterial roadway reconstruction and widening, and multimodal corridor projects.

Key Staff and Value Engineering Team



MATT OLSSON, P.E. - ROADWAY/UTILITY COORDINATION

Matt takes a progressive approach to transportation design, which promotes creative, technology-driven solutions to solve increasingly complex systems. Furthermore, Matt recognizes that transportation projects are about moving people, not just cars. He has a diverse prospective from completing design work all across the country, including roundabouts, traffic signals, roadway safety improvements, pedestrian safety improvements, and intersection reconfiguration. Matt is known for being attentive and responsive to his clients, providing requests and answers promptly. Clients have told Olsson that he coordinates agencies and utilities well, impressing clients with "top-notch organization skills" and being easy to communicate with. His deliverables have been described as "airtight," which shows he understands client service and attention to detail. **Matt brings clarity, coordination, and technical excellence to unite disciplines, agencies, and communities.**



MICHELLE DANAHER, P.E., CFM - DRAINAGE

Michelle has experience in water resources engineering, including hydraulics and hydrology, channel design and restoration, hydraulic structures, drainage calculations and modeling, technical report preparation, and plan production. Her responsibilities include hydraulic and hydrologic modeling, preparing drainageway master plans, delineating floodplains, storm drainage and water quality design, and preparing construction documents. **Michelle has extensive experience delivering stormwater-smart designs through strong collaboration with MHFD and local communities, including Arvada.**



KRISTI GARRISON, P.E. (HG) - MULTIMODAL, MOT/PHASING

Kristi offers 12 years of experience in the design of roadways and active transportation. Throughout her career, Kristi has designed many local agency roadways and active transportation projects. She has managed projects and assisted in the development of pavement management programs. She has also worked under Arvada's multimodal on-call contract and is familiar with Arvada's expectations. **Kristi will use her relative experience with roadway design and pavement management to understand and solve the challenging MOT/ Phasing facing this confined corridor.**



STEPHEN FUSSNECKER, P.E. (HG) - STRUCTURAL ENGINEERING

Stephen has 18 years of experience in bridge and retaining wall design, analysis, drafting, inspection and load rating; and six years as a Design Engineer and Bridge Technician for CDOT. He has supervised and performed bridge load ratings for hundreds of structures of varying types and complexity, including pedestrian facilities. Stephen brings reliable structural design that fits the project, supports the team, and minimizes surprises in the field through proactive, detail-driven coordination. **Stephen will bring strong structural experience to this project, including serving as an engineer for CDOT across the state.**

Our Partners

The Olsson team includes Hg Consult, T2 Utility Engineers, and Permit2Parcel. These partners were specifically chosen to strengthen our internal team's capabilities and provide additional ideas and experience. In particular, Olsson and Hg Consult have delivered successful projects across the country that involved roadway improvements, intersection upgrades, and complete streets designs. Our cultures and commitment to providing strong technical expertise to clients has led to positive impacts in the communities we serve.

HG CONSULT, INC. - VALUE ENGINEERING/ MULTIMODAL/STRUCTURES/MOT PHASING

Hg Consult Inc. (Hg) is a full-service planning and engineering firm that delivers roadway and highway projects of all sizes with a strong emphasis on multimodal, bicycle, and pedestrian design, integrating roadway geometry, traffic operations, and safety analysis with bike and pedestrian facilities, including ADA-compliant sidewalks, crossings, trails, and shared-use paths. **Hg will augment our team with multimodal/active modes transportation expertise, structural engineering and value engineering support, with a local municipal-focused engineering team.**

PARCEL2PERMIT CONSULTING LLC - RIGHT-OF-WAY/ANNEXING

Parcel2Permit Consulting LLC (P2P) is a siting and land rights firm specializing in infrastructure project support through expert right-of-way (ROW) and easement acquisition, and permitting services. Founded on the principle that infrastructure should enhance quality of life, P2P offers a relationship-focused approach to navigating the complex processes that move projects from concept to construction. **Olsson and P2P's owner, Courtney Wallace, have partnered on multiple Colorado transportation projects, which have included complex ROW and easements with private and public stakeholders.**

T2 UTILITY ENGINEERS - SUBSURFACE UTILITY ENGINEERING

T2 UES, Inc. d/b/a T2 Utility Engineers (T2ue) provides a full range of Utility Engineering services, including Subsurface Utility Engineering (SUE), advanced geophysics, test holes/potholing, utility coordination, and surveying. Recognized as a leader in managing the risks associated with above ground and subsurface utilities, T2ue retains a vast array of geophysical designating equipment and one of the largest fleets of SUE vehicles within the West. **Olsson has relied on T2ue for 6 projects in Colorado, as their SUE data has proven to be reliable and accurate, resulting in better designs.**

Our Team's Project History

Olsson and HG Consult have teamed on nearly 30 projects together since 2012. We are excited to bring this long-standing relationship to this project. Below is a brief overview of the types of transportation projects we have delivered together:

- Transportation Planning (Bike/ Ped, Corridor Studies) (4)
- Bridge Design/Rehabilitation (2)
- Corridor Studies (1)
- General Transportation/Traffic (4)
- Interchange Studies/Design (3)
- Roadway/Highway Design (5)
- Other Services (10)

A ROBUST LOCAL TEAM.

To tackle this project, Olsson has strategically partnered with Hg, T2ue, and P2P, forming a powerhouse team deeply familiar with Colorado's unique project landscape. Hg enhances our approach with overlapping services that fuel innovation and foster cross-disciplinary collaboration - enabling us to anticipate challenges and craft forward-thinking solutions tailored to Arvada's needs. T2ue is a trusted partner bringing us reliable utility information to make educated design decisions. P2P's Courtney Wallace brings invaluable expertise in right of way acquisition, having consistently delivered on-schedule, dependable results, even when faced with obstacles.

This partnership is proven in practice. Together, our firms have successfully delivered more than 15 transportation projects, demonstrating time and again that our combined strengths create value far beyond what any one team could achieve alone. By leveraging our diverse skills, local knowledge, and a steadfast commitment to adaptability, we ensure projects move forward on budget and on schedule, providing resilient solutions that serve the community well into the future.

City of Arvada

Project Manager
Lee Kunselman, P.E., PMP

Roadway
Matt Olsson, P.E.
Sam Enos, EI
Zach Deobald

Drainage
Michelle Danaher, P.E., CFM
Katie Lennie, EI

Multimodal
Kristi Garrison, P.E. (Hg)

Traffic
Blake Bredbenner, P.E.

MOT/Phasing
Kristi Garrison, P.E. (Hg)

Structural Engineering
Stephen Fussnecker, P.E. (Hg)
Brandon Roesler, P.E.

Environmental
Tamara Burke

Utility Coordination
Matt Olsson, P.E.

Survey and ROW Plans
Eli Donaldson, PLS

Infrastructure Funding
Jill Sevits

Subsurface Utility Engineering
Cort Darby (T2ue)

ROW Annexation and Acquisition
Courtney Wallace (P2P)



Resumes for Lee and our Key Staff have been included as an attachment to this proposal.

DETAILS OF PROPOSAL

Together, we will deliver solutions for the Leyden Road corridor that provide long-term value by enhancing emergency access, walkability, and bikeability to support a safe, efficient multimodal network. In close partnership with the City of Arvada, our team will apply strong technical expertise and a proven value-engineering process to identify the most effective and cost-efficient design approach.

Although the current project limits fall short of State Highway 93, our strategy remains flexible to accommodate future improvements to the west and to evaluate how potential extensions may influence the proposed design. Under the leadership of Project Manager Lee Kunselman, our team structure pairs experienced task leads with knowledgeable junior staff who will be responsible for developing the PS&Es. This approach ensures high-quality deliverables, continuity, and cost-efficient production throughout the project.

Project Approach

TASK 1 – PROJECT MANAGEMENT, COORDINATION, AND MEETINGS

Olsson uses a Project Management Plan (PMP) toolbox in the delivery of all of our projects. This framework guides the project team and the City through each phase of project delivery — from initiation and planning through execution, monitoring, and closeout. The PMP will be provided to the City for a deep understanding of how the project will be managed and tracked during the duration. This structure allows the project team and the City to monitor project health, support timely decision-making, and maintain alignment with the critical path.

Consistent, transparent communication is central to our approach. Lee will facilitate bi-weekly meetings taking approximately a half hour. The intent will be to efficiently discuss progress, outstanding inquiries, and upcoming work efforts. Having these touch points keeps the Olsson team accountable and ensures continual project progress. Olsson will provide coordination of all project meetings, timely meeting minutes, monthly invoicing, and progress reports that track the deliverables, the budget, and the schedule. These touchpoints give the City clear visibility into priorities and critical path elements.



Raised medians to be removed. Traffic calming will be evaluated for speed reduction and pedestrian safety.

As part of this initial task, we will also evaluate opportunities for public engagement support. Our team can assist with identifying engagement points, developing accessible outreach materials, designing pop-up events, or supporting City-led public meetings. Olsson's in-house staff has extensive experience providing these services and tailoring them to community needs.

TASK 2 – PROJECT INITIATION, KICKOFF, AND CONCEPT PLANS

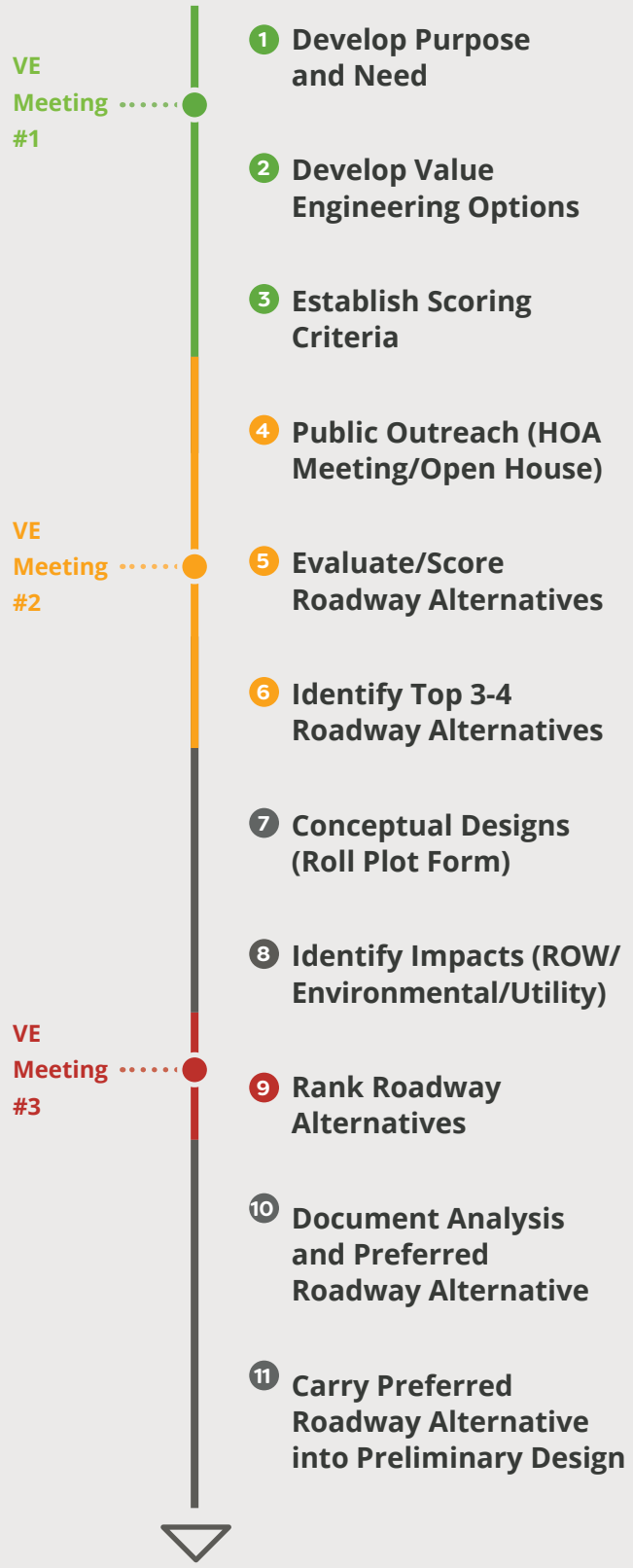
Project Initiation/Kickoff. This task aligns the project team and the City on the Leyden Road Improvement project's scope, Value Engineering (VE), and design approach. Our methodology includes investigating background information, establishing and following the VE process, and developing conceptual designs for not only Leyden Road but the intersections with Culebra Street and Yule Way pedestrian improvements. An internal kickoff meeting will be held with the City staff and Olsson team. At this meeting the DRAFT PMP will be shared and a detailed discussion of the project scope will be held. This meeting will set expectations and clarify outstanding scope items. Next an external kickoff meeting with Arvada, Jefferson County, Tucker Ditch, Church Ditch, CDOT, and other stakeholders will be held. Our established relationships with local and state agencies, as well as our experience in coordinating with ditch companies, will facilitate productive discussions. Following the kickoff meetings, Olsson will prepare a Memorandum of Scope documenting key clarifications and revisions to the project scope.

Value Engineering. Olsson is bringing roadway, multimodal, drainage, structural, and MOT/phasing experts to these challenging improvements project. We have partnered with Hg in order to provide Arvada with two strong municipal focused engineering firms that have worked together and will provide multiple perspectives to determining a preferred solution. Our PM, Lee Kunselman, has performed multiple value engineering efforts related to transportation projects across the western United States. His experience focuses on working closely with clients to determine cost-effective, resilient solutions in a collaborative environment. Lee will lead the VE effort while always looking "down schedule" toward meeting project requirements. We believe that three (3) VE Meetings will be appropriate to coordinate and move through the process. Our team has developed the following anticipated Value Engineering process. The final process, VE Options, and Scoring Criteria will be refined along with the City prior to beginning focused efforts.

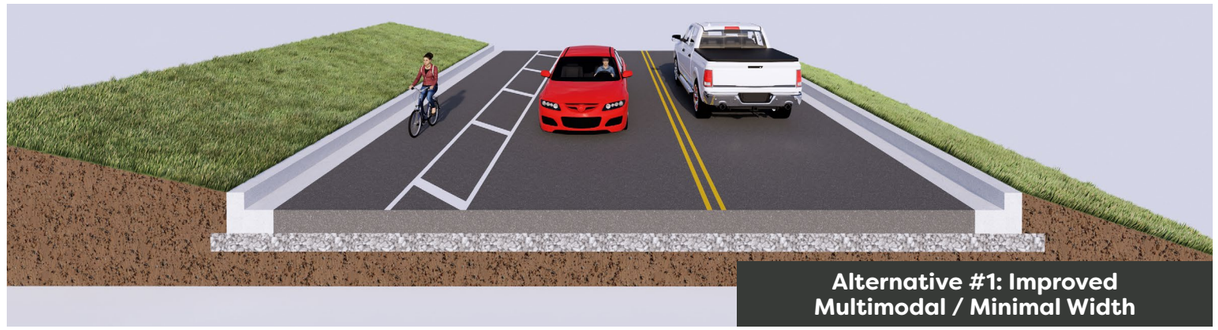
Conceptual Plans. The Olsson team believes the Best Value for Arvada is to provide roll plots of the 3 or 4 top roadway alternatives as part of **Step 7** of the VE process. This will allow the roadway corridor to be reviewed in it's entirety and support understanding of how it lays on the land. These exhibits will identify impacts to resources based on the roadway typical sections including identified horizontal and vertical efficiencies that improve the design. The rolls plots will guide **Step 9** of the VE process during **VE Meeting #3**. Our key team members that are involved will attend these meetings and work collaboratively with Arvada to analyze and ultimately select a preferred alternative.

Our team will also develop conceptual designs for the Culebra Street and Yule Way intersections and associated connections to the Pattridge Open Space Trail. Matt Olsson and Kristi Garrison bring their multimodal and active modes experience to these locations with the desire to improve pedestrian and bicycle movements and safety to the Leyden Road corridor. Improving these specific locations will consider future roadway improvements even though they are not within the planned PS&E delivery segment. Safer pedestrian crossings and connectivity to the trail across open space and the creek will be great improvements for the Arvada community. These intersection designs will be through a typical design and concept level plan development setting the City up for future funding opportunities.

Value Engineering Steps



TYPICAL SECTIONS OPTIONS - VIEW LOOKING EAST



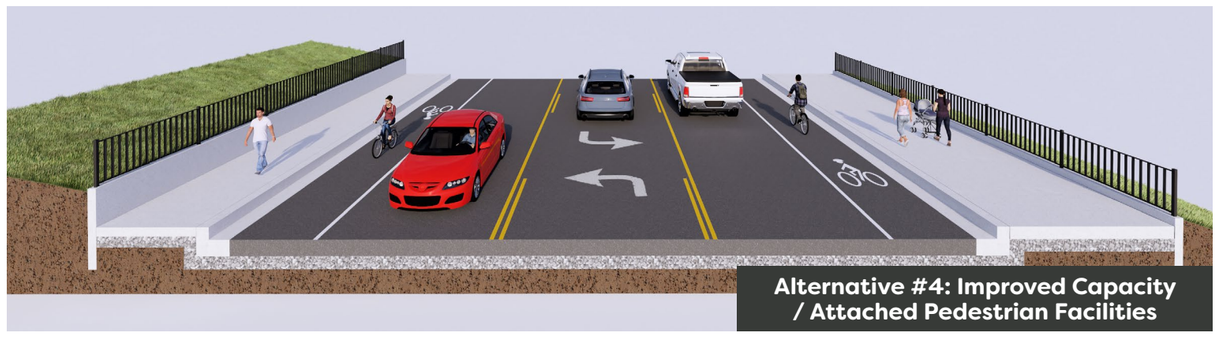
Alternative #1: Improved Multimodal / Minimal Width



Alternative #2: Improved Multimodal / Attached Pedestrian Facility



Alternative #3: Improved Egress Capacity / Attached Pedestrian Facility



Alternative #4: Improved Capacity / Attached Pedestrian Facilities

Value Engineering Options

TYPICAL SECTION ELEMENTS
- Lane Widths
- Bike Lane
- Sidewalk and Trail
- Utility Corridor

PAVEMENT TREATMENT
- Pulverize (Hot or Cold-in-Place)
- Mill & Overlay + full Depth Widening
- Subgrade Treatment
- Full Depth Reconstruction

RETAINING WALL TYPE
- Cast-in-Place
- Mechanically Stabilized Earth
- Modular Block (large blocks)
- Soil Nail

MOT/PHASING
- Lane Closure
- Narrow Lanes
- Night Work
- Temporary Widening

WATER QUALITY
- Pond
- Swales
- Hydrodynamic Separation

Potential Scoring Criteria

◊ Fulfillment of Purpose and Need
◊ Meets Street Standards
◊ Safety Benefits
◊ Multimodal Accomodations
◊ Drainage/Water Quality Considerations
◊ ROW Impacts
◊ Environmental Impacts
◊ Driver Expectations
◊ Potential Grant Funding
◊ Utility Corridor Accomodations
◊ Constructability
◊ Construction Cost



TASK 3 – DATA ACQUISITION AND SURVEY

The data acquisition phase of the project will begin immediately following the project kick-off meeting with the City and any stakeholders they wish to include. Olsson survey and ROW research will focus on the segment between Orion Way and Indiana Avenue and include the Culebra Street and Yule Way intersections as well. T2ue will also develop the QL-B for these same limits. Progressing toward generating the data required for design will ensure that the project will proceed into design as quickly as possible following the selection of a preferred alternative.

TASK 4: ROW ANNEXATION AND ACQUISITION AND ROW PLANS PREPARATION

Olsson has decades of experience developing ROW plans that meet federal, state, and municipal requirements. Our staff will work closely with P2P to ensure that the plans meet industry standard toward ROW annexation and acquisition. Our field staff will also stake the proposed ROW, permanent, temporary, and existing ROW lines as needed.

Acquisition of ROW is a known critical path issue on every project and becomes a risk when addressed too late in the project lifecycle. Early and frequent communication with the city is essential for successful delivery of ROW acquisition and utility relocations. The P2P team will work with the City and design team to establish a ROW program built on the following steps:

1. **Discovery and Baseline – building a complete picture of constraints, stakeholders, and permitting requirements. This includes title reports that are shared with the survey and design teams. Getting this step started early is important to expediting any acquisitions.**
2. **Strategy and Design Coordination – integrating ROW specialists into alignment with design prevents late-stage conflicts. Bringing landowner concerns to the team provides a thorough understanding of concerns.**
3. **The Uniform Act-Adherence – following industry standards and requirements related to effected landowners.**

P2P has performed an exploratory investigation (below) as the first step of the **Discovery and Baseline** step, with preliminary findings outlined below:

REDUCING ROW RISK WITH INTENTIONAL COORDINATION

Challenge	Strategy
Multiple HOA-owned parcels	Initiate contact as soon as NTP is given, work closely with HOA attorney to understand covenants and how land is granted under them. Potential for Public Engagement sessions at HOA board meetings. **Mitigates budget and schedule risk.**
Canal and Open Space parcels	Understanding if there any conservation easements associated with the canal or open space that would place limits on the ability to gather field information or perform construction within the parcels. **Mitigates schedule risk.**
Parcel owned by Publics Service Company of Colorado (Xcel)	Courtney works with Xcel's siting and land rights department often and can quickly obtain the correct point of contact to work on survey permission and license agreements. **Mitigates schedule risk.**
Utilities located near the roadway	Early communication with providers yields best results. Assist the team in identifying which utilities are within ROW and any that may need replacement easements. Support the utility team in coordinating utility relocation agreements as necessary. **Mitigates schedule risk.**
Business access for Rowdy Rider Academy at 15625	Work with the owner to understand peak times the driveway is accessed, coordinate with design and CM teams to ensure business is not affected. **Mitigates schedule risk.**



TASK 5: TITLE INSURANCE AND CLOSING SERVICES

P2P will work with the project PM to route agreements through the City and title company to provide insurance and escrow services, to finalize acquisitions.

TASK 6: PRELIMINARY DESIGN (MINIMUM 30% DESIGN)

Following the VE process and selecting a preferred alternative, Olsson will immediately begin developing the project plans to advance and refine the roadway alignment and profile while minimizing impacts to ROW, environmental resources, and existing utilities.

Our team will optimize the corridor's typical section, evaluate wall configurations, and define construction phasing and traffic-handling strategies early in the process. Because this corridor is highly constrained, planning for construction at the outset is essential. This approach helps the client avoid avoidable delays, reduce disruption to the traveling public and nearby residents, and maintain project momentum.

As part of the preliminary design package, we will deliver an Opinion of Probable Cost (OPC) that includes quantified major construction items and an appropriate contingency for remaining elements. This early cost clarity helps the client manage budget expectations and support decision-making.

Finally, Olsson's experience shows that early engagement from the agency's traffic, roadway, stormwater, water quality, maintenance, and construction staff leads to better, more buildable outcomes. We will encourage these stakeholders to review deliverables, provide comments, and participate in a design review meeting, ensuring the project reflects real operational needs and reduces costly revisions later.

TASK 7: 60% ROADWAY DESIGN, TASK 8: 90% ROADWAY DESIGN, AND TASK 9: FINAL DESIGN

Arvada needs confidence that each PS&E submittal—30%, 60%, 90%, and Final—is accurate, coordinated, and ready for efficient review. To meet that need, our team applies a rigorous Quality Control process at every stage, ensuring that plans, specifications, and the OPC are consistent, complete, and aligned with the City's expectations. The Olsson team is known for delivering quality PS&E packages as they progress through the design process. For example, our Wadsworth Path Project generated this CDOT review comment - "I do not see any mistakes. I looked for a day and Olsson is just good. So if they made one, I don't see it." – Thomas Quigley, CDOT Region 1, Local Agency Program.

As design progresses and the level of detail increases, effective coordination becomes critical. Our approach brings both the internal project team and external partners together by using a single Bluebeam session for each PS&E package. This provides the City and stakeholders with one centralized location for comments, simplifies review meetings, and helps keep the project on schedule.

Several key milestones, particularly securing approvals from utility companies and the Church Ditch irrigation company, can influence the project's timeline. We recommend developing draft approval and permitting packages along with the 60% design and scheduling one-on-one meetings to step through anticipated impacts. Our approach ensures that ample detail is available yet provides the maximum time for any anticipated relocations.

Ultimately, this gives Arvada predictable reviews, fewer surprises, and a smoother path to successful delivery.

26-ENG-002 Design Services for Leyden Road Improvements – Detailed Scope

Task 1 – Project Management, Coordination, and Meetings

A. Project Management and Coordination

This task is in support of the Arvada Project Manager and the management of the Leyden Road Improvements project from Notice to Proceed (NTP) through Final Roadway Design. Olsson will develop a Project Management Plan that includes the project schedule, communication, change management, quality-risk management, and safety plans. Continual sub-consultant management and coordination will ensure efficient project schedule advancement. Olsson will lead the coordination with Arvada staff, agencies, stakeholders, and CDOT. Invoicing, sub-consultant invoicing, and progress reports will be developed monthly and submitted for review and approval.

B. Project Meetings

Meeting agenda's will be developed, and meeting minutes will be completed within 10 days and provided to the Arvada Project Manager. Progress meetings (virtual) will be held bi-weekly and efficiently address relevant topics within 30 minutes. All other meetings are assumed to be in person. The following project meetings are anticipated:

- Bi-weekly progress (assume 28)
- Value Engineering (assume 3)
- Public Outreach (assume 1)
- Preliminary Design Review
- 60% Roadway Design Review
- 90% Roadway Design Review
- Final Roadway Design Review

Task 2 – Project Initiation, Kickoff, and Concept Plans

C. Project Initiation and Kickoff

Task 2 focuses on the efforts to initiate the project, understand the existing data, and determine the conceptual design. Olsson will coordinate, organize and lead the two anticipated kickoff meetings of Arvada and Olsson (internal), and Agencies/Stakeholders (external). The meetings will focus on documenting project goals understanding project priorities and building consensus across the entire project team. Research the existing data and bring this information to the Value Engineering process.

D. Value Engineering/Conceptual Plans

This phase will follow the Value Engineering process toward selecting the preferred alternative. Olsson along with Arvada staff will develop up to 6 roadway typical section alternatives, identify storm drainage and water quality options, investigate the existing roadway alignment, identify deficiencies, analyze retaining wall options and coordinate with the geotechnical engineer (RockSol) on pavement treatment options. These project elements will be used to develop the VE Criteria and scoring used to evaluate the options. Conceptual Plans (roll plots) will be generated and based on the existing survey and aerial imagery available through Arvada. It is anticipated that there will be three in-person meetings that will discuss, evaluate, refine and score toward selecting a preferred alternative. The final deliverable will be a roll plot of the conceptual design and a memorandum documenting the VE process and outcome. Conceptual designs will be developed and explored at the Culebra Street and Yule Way intersections with Leyden Road to improve pedestrian crossing safety and make a connection to the Pattridge Open Space trail.

Task 3: Data Acquisition and Survey

E. Planning, Control and Topographic Survey

Olsson surveying will prepare a Quality Management Plan (QMP) for the project that helps ensures all work is accurate, consistent, and defensible by defining clear objectives, required standards, and team responsibilities. It outlines the survey scope, applicable regulations, control requirements, safety concerns and accuracy expectations while assigning roles to the project manager, survey crews, office technicians, and QA/QC reviewers. The survey QMP will establish quality assurance steps focused on preventing errors through consistent methods, redundancy, proper control, and documented workflows. Quality control will focus on independent checks of calculations, control closures, monumentation, data completeness, surface accuracy, CAD standards, and deliverable formatting. Additionally, it will document all the information provided by the City of Arvada.

Once Notice to Proceed is provided, Olsson will begin the process of obtaining a Right-of-Way Access Only Permit through the City of Arvada's online permitting system. During this time, Olsson's acquisition subconsultant P2P will reach out to private and public land owners to obtain Permission to Enter Private Land letters. We will issue written notification at least 14 days before entry as required by statutes.

After the project kickoff and as we begin to mobilize to the site, Olsson will prepare a Job Safety Analysis (JSA). A JSA is a critical tool that helps survey crews recognize, evaluate, and control hazards before work begins each day. By systematically breaking down each task—whether it involves traffic exposure, rugged terrain, equipment operation, or environmental conditions—the crew identifies potential risks early and implement practical controls such as improved communication, proper PPE, safe traffic setups, or adjustments to workflow. This daily habit not only reinforces situational awareness but also promotes

a culture where every team member takes ownership of safety. Ultimately, a well-prepared JSA helps the crew anticipate challenges, reduce the likelihood of incidents, and ensure that everyone returns home safely at the end of the day.

Olsson has researched the Arvada Geodetic Control Network (AGCN) and will utilize three surrounding AGCN monuments to establish project control. Primary Control Points will be set along the corridor and envelope the entire proposed limits. Secondary Control will be set within the interior of the site at advantages locations for the specific areas of development. Control will be established through static GNSS measurements and closed loop digital level runs and will be documented within a Land Survey Control Diagram.

For the topographic survey Olsson recommends performing the roadway corridor mapping using our Unmanned Aerial System (UAS) which will collect LiDAR and photogrammetry data as required. Using aerial LiDAR and photogrammetry will allow Olsson to accurately collect topographic data in a safe manor. Leyden Road is a heavily traveled and narrow roadway. Collecting data through remote sensing will minimize disturbances to traffic and limit our survey crews time on site.

Olsson will set 2' × 2' black-and-white aerial control panels positioned over surveyed ground control points. The control will be placed outside the immediate corridor which also helps keep our survey crews out of the flow of traffic. The control points will support the geo-referencing of the LIdar data, as well as boresight calibration and strip alignment. Detailed flight planning will be conducted to ensure adequate swath overlap, point density, and ground penetration as well as anchoring the data to the project datum.

Olsson has confirmed the area is not within a controlled airspace and we are clear to fly. Before flying our FAA certified pilot will prepare a Job Safety Analyses for safe UAS operations. During the flight the pilot will monitor FAA radio frequencies for nearby air traffic.

The UAS flight will capture high-density lidar and detailed aerial imagery from our platform equipped with a sensor capable of emitting 240,000 pulses per second and recording up to five returns per pulse. This high-frequency, multi-return capability allows laser energy to penetrate dense vegetation, such as the prairie grasses found within the project corridor, ensuring that a fraction of each pulse reaches the true ground surface. As a result, the lidar dataset will accurately capture subtle natural-ground undulations while also producing highly reliable elevations along the roadway surface. Aerial imagery will be collected concurrently with the lidar to produce a colorized point cloud; however, Olsson will also conduct a secondary photogrammetric flight to acquire higher-resolution images suitable for generating a detailed orthorectified mosaic matching the survey data if deemed necessary. These images will clearly depict corridor features such as utility boxes, pavement conditions, and other visible infrastructure. The total coverage area will extend approximately 200 feet from the roadway centerline, allowing the project to benefit from an expanded collection footprint with no additional cost due to the efficiency of the UAS-based acquisition method. As part of the aerial data collection process, Olsson will establish high-quality check points distributed throughout the corridor in locations representative of the existing ground conditions. These check points will be collected using GNSS equipment and procedures similar to those used in establishing secondary control. The independent check points will then be compared against the classified point cloud and resulting bare-earth surface to verify that the dataset meets the project's required vertical accuracy thresholds—2 cm RMSEV along paved roadway surfaces and 10 cm RMSEV within vegetated areas.

After collection, LiDAR processing will include GNSS/IMU trajectory computation, RTK/PPK corrections, strip alignment, and application of ground control. The point cloud will then be evaluated against the independent validation points to compute vertical RMSE in accordance with ASPRS Positional Accuracy Standards (Edition 2, Version 2, 2024). Following accuracy confirmation, the dataset will be fully classified into ASPRS-appropriate classes, including ground, roadway/pavement, multiple vegetation levels, utilities where detectable, and other relevant features typical of roadway-corridor mapping. Processing of data will be limited to the areas needed to progress the preliminary roadway and trail design. Processing of additional areas will be possible if deemed necessary.

The classified ground point cloud will then be used to generate a Digital Terrain Model (DTM), which will be exported for import into Civil 3D. Once in Civil 3D, the DTM will undergo a final validation process to ensure that both the bare-earth surface model and the accompanying orthorectified photograph meet the required accuracy tolerances and are suitable for engineering design. Following this verification all visible existing conditions—including roadway features, drainage elements, utilities, and natural ground characteristics—will be extracted from the validated model. Any areas obscured by vegetation or which require more detailed information will be supplemented by conventional on the ground survey mapping. The field data will be integrated with the aerial data to produce a complete existing-conditions dataset for use in the project's design phase.

F. Subsurface Utility Engineering

T2ue specializes in the professional investigation and analysis of existing utilities to help our clients understand and mitigate the risks they pose. We provide comprehensive and accurate utility information using industry-leading technology, collection, and processing methods together with professional insight, analysis, and decades of experience. T2ue's approach to the SOW combines teaming with the most qualified consultants and vendors in Colorado to deliver on time, on budget, quality services, and deliverables. T2ue conducts utility investigations meeting the requirements of ASCE 38-22, CRS 9-1.5, and CDOT's SUE checklist. T2ue's team is comprised of firms who will support CDOT from inception to inspection.

Our SUE approach starts with discussing the project scope to determine the level of utility investigation required to satisfy the overall project objectives. The SUE investigation team begins with researching utility owners and collecting utility maps for all utilities in the project area. T2ue leverages 4M Analytics' advanced subsurface utility mapping technology to enhance our SUE investigations. 4M's platform aids in utility density estimates during the planning phase, allowing for more accurate estimates. 4M's AI-powered analytics facilitate the early identification of potential utility conflicts, allowing our team to proactively engage project stake holders and utility owners.

T2ue utilizes an array of geophysical investigation tools and techniques to designate both known and undocumented utilities. T2ue's experienced SUE Techs are trained on the latest geophysical equipment, including pipe and cable locators, GPR, magnetometers, detectable rodders, and sondes. Experienced SUE Managers ensure the proper equipment is selected and utilized, considering the target utility properties, proximity to potential conductors, soil conditions, expected depth, and safety considerations, to name a few.

T2ue utilizes technology including laser scanning equipment, or Light Detection and Ranging (LIDAR) and 360 scanning, to collect highly accurate and precise underground chamber data. This technology provides detailed information regarding both above and below grade utility related structures and appurtenances. We utilize 360-degree structure scans due to their high reliability; in the event of data discrepancies between records and field findings, the point cloud can be reviewed for accurate analysis, eliminating the need for a revisit of the site. T2ue also utilizes Multi-Channel Ground Penetrating Radar (MCGPR) technology. T2ue's MCGPR unit uses over 125 separate channels with double polarized antennas, enabling the system to gather data simultaneously for both longitudinal and transversal purposes. The MCGPR unit provides real-time 3D visualization of subsurface structures. The unit is towed behind a vehicle at speeds up to 25 MPH, which permits gathering GPR data with minimal traffic control, thereby reducing the impact on the public. T2 UES Inc. aligns the MCGPR data to match project control and overlays the information onto the existing utility model. By comparing the MCGPR data with as-built records and traditionally mapped utilities, T2ue enhances the accuracy of utility data.

T2ue's vacuum trucks utilize air-assisted equipment to complete the excavation of test holes. T2ue also partners with Diversified Underground for Hydro-Vacuum excavation in situations where hyrdo-excavation is required. When Diversified Underground provides hydro-excavation services, a T2ue technician is on-site at all times to observe and record the utility information. Completed Test Holes are surveyed and included in SUE drawings. T2ue's Colorado PE is in direct charge of the data collection and deliverables.

T2ue prepares an ASCE 38 compliant SUE Report. Deliverables are submitted to CDOT during FIR and FOR and are uploaded to ProjectWise. Final SUE Reports, Plans, and Test Hole data reports are stamped by our Colorado PE and are submitted as digital files. Electronic models are compliant with the CDOT Workspace in ORD and are submitted through the PointMan application for incorporation into CDOT records. In addition, if a 3D model is required for a project, Pointman application can document electronic depth information streamlining the 3D processing and accuracy.

Task 4: ROW Annexation and Acquisition and ROW Plan Preparation

G. Acquisition of Right of Way

Parcel2Permit team will work seamlessly with the City of Arvada and design team to establish a ROW program built on the following approach:

Discovery and Baseline. Build a complete picture of constraints, stakeholders, and permitting requirements. Upon receiving NTP, Parcel2Permit will request title reports to be shared with the survey team and send Project Information Letters to landowners within a defined project potential area. These letters will request Permission to Enter for survey, SUE, geotechnical investigations, and valuation study, as well as request an outreach meeting with landowners to understand property details and owner concerns, including access, irrigation, current use, and future plans.

Strategy and Design Coordination. Integrating ROW specialists into alignment design prevents late-stage conflicts. Building upon information gathered at initial outreach meetings with owners and stakeholders, P2P can inform the design team of

landowner related concerns. They can meet with owners again at the preliminary design phase to review the roadway plans and request revision if necessary. P2P will collaborate with the surveyor to create and review ROW plan sets and property descriptions for the identified fee parcels, permanent and temporary easements necessary to construct the chosen design. At 60% design, ROW and Utility relocation needs should be defined, thus appraisal and valuation begin.

The Uniform Act – Adherence. The P2P team will issue a Notice of Interest to effected landowners. In cases where initial valuation studies yield an acquisition to be over $5,000, it is required that the City pays for owners to obtain their own appraisal. Under the Final Rule of the Uniform Act effective June 2024, the COA may choose to use a waiver valuation, instead of an appraisal when acquisitions are valued at $10,000 or less. Once valuations are complete and the COA has approved an FMV, Courtney and her team will send an Offer Letter and begin to negotiate agreements using City-approved documents. Depending on timing P2P can recommend using an incentive-based offer to encourage early acceptance.

H. Annexation

The City of Arvada's proposed annexation of unincorporated Jefferson County land will follow C.R.S. § 31-12-101 et seq., including the eligibility and contiguity requirements of C.R.S. § 31-12-104 and the petition procedures of C.R.S. § 31-12-107. Arvada will complete the annexation process in accordance with Arvada Land Development Code § 8-3-3, including preparation of the annexation map, conducting the required Neighborhood Meeting, and completing public hearings before the Planning Commission and City Council. Because the land lies within Jefferson County, Arvada will also submit annexation materials for review under Jefferson County Policy Manual, Part 7, Chapter 5, Section 6, which outlines the County's review of annexation petitions. Through this coordinated state, county, and city process, Arvada ensures compliance with all applicable requirements for annexing the targeted unincorporated area into City jurisdiction.

I. Right of Way Survey and Plan Preparation

A Right-of-Way (ROW) retracement survey involves the systematic re-establishment and verification of existing public and private ROW boundaries based on the original intent of prior surveys, plats, deeds, and right-of-way conveyance documents. Olsson will collect, analyze, and reconcile all available record information, including plats, subdivision maps, annexation documents, centerline descriptions, deeds of dedication, easements, transportation plans, and historical right-of-way documents. The survey includes field recovery of controlling monuments—such as section corners, aliquot corners, subdivision corners, centerline monuments, and prior ROW markers—and documentation of found conditions. The surveyor will evaluate record-to-field consistency, perform boundary analysis, and apply accepted boundary retracement principles to determine the most defensible location of the existing ROW limits and centerline alignments.

The work will include measurement, validation, and mapping of all recovered evidence, including fences, occupation lines, improvements, pavement edges, and physical indicators that may support the interpretation of historic right-of-way locations. Where monuments are missing or disturbed, the surveyor will apply professional judgment to re-establish those positions using proportionate measurement or other acceptable boundary restoration methods. The survey will result in the preparation of a Right-of-Way Plan Set depicting recovered and set monuments, bearings and distances along the centerline and sideline ROW positions, controlling documents referenced, and will include a Title Sheet, Tabulation of Properties, Land Survey Control Diagram, Monumentation Sheets, Plan Sheets and an Ownership Map. The ROW retracement will establish a reliable and defensible basis for subsequent engineering design, ROW acquisition, annexation mapping, and construction planning activities.

The ROW plans will also form the basis for all legal descriptions to support land acquisitions or agreements for easements. Draft ROW plans will be complete along with the 60% Roadway Design phase and included for review. A separate ROWPR meeting will be held meeting the requirements set by CDOT associated with land acquisitions. The Final ROW plans will be delivered with the 90% Roadway design package, and the acquisition process can begin. As part of the ROW process, Olsson will set stakes in the field to show limits of acquisitions and will set right of way monuments.

Task 5: Title Insurance and Closing Services

The following approach will be used to comply with all requirements outlined for title insurance, title commitments, closing coordination, and associated services:

J. Title Insurance & Title Commitments

Contract with a qualified Title Company to provide title insurance in an amount equal to the value of each parcel being acquired. We have a strong relationship with Fidelity Title, backed by Commonwealth Land Title Insurance, but can certainly support the City with their chosen title provider. For easement acquisitions where the City determines that title insurance is not cost-effective, we will still ensure the delivery of a complete title commitment accompanied by:

- Copies of all relevant conveyance documents
- A 5-year chain of title, detailing all ownership changes during that period
- Title updates reflecting any change in ownership throughout the acquisition process up to closing will need to be negotiated with the chosen title company but will be obtained.

This ensures the COA receives complete, timely, and accurate title information for all property interests being pursued.

K. **Closing**
Working with the project PM to route agreements through City and title company to provide insurance and escrow services, Parcel2Permit will finalize acquisitions. They can provide construction notification letters to owners and will prepare a construction line list highlighting unique challenges for the contractor. Courtney's team will remain available for landowner interaction as needed for the duration of the construction.

Task 6: Preliminary Design

Olsson will prepare design plans for the Leyden Road Improvements between Orion Way and Indiana Street. This will include plans for the removal of the 6 landscape medians near Culebra Street, Yule Way and Leyden Rock Drive.

Olsson will begin with 30% level design after the topographic survey is completed and a preferred alternative is selected. The preliminary design will focus on major roadway, storm drainage, and retaining wall elements. A draft drainage report will be developed that includes conceptual water quality considerations. Designs will be prepared using the City of Arvada Roadway Design and Construction Standards supplemented by CDOT and national standards where needed. A 30%-level plan set depicting the proposed improvements will be prepared and submitted to the City for review, along with a preliminary opinion of probable cost (OPC). Quality control reviews will be performed on all documents prior to submission. No specifications will be provided at the 30% level. Plan sheets will be 11" x 17" prepared in Autodesk Civil3D. The following plan sheets are anticipated with the Preliminary submittal.

- Title Sheet (1)
- General Notes (1)
- Typical Sections (2)
- Survey Control Plan (Task 1)
- Ownership Map (1)
- Geometric Control Layout (1)
- Summary of Quantities (1)
- Removal and Reset Plans (8)
- Roadway Plan and Profile (8)
- Grading and Drainage (8)
- Retaining Wall (2)
- Construction Phasing
- Cross Sections (6)

Task 7: 60% Roadway Design

Following the preliminary roadway design review meeting, Olsson will begin the 60% level design and plan production. Comments supplied by the City will be incorporated into the design and tracked via a comment response form. Additional details will be provided for intersections, storm drainage, water quality, erosion control and roadway elements. Project specifications will be developed based on the City of Arvada Engineering Code of Standards and Specifications and CDOT and included with the 60% submittal. The OPC will be updated. The following additional sheets will be included in the 60% submittal.

- Tabulations
- Survey Tabulation (1)
- Subsurface Utility Engineering Plans (8)
- Roadway and Intersection Plans (4)
- Drainage and Utility Plan and Profiles
- Erosion Control Plans
- Signing and Striping Plans
- Traffic Control Details
- Lighting Plans (8)

Task 8: 90% Roadway Design

Following the 60% roadway design review meeting, Olsson will begin the 90% level design and plan production. Comments supplied by the City will be incorporated into the design and tracked via a comment response form. Project specifications will be updated and included with the 90% submittal. The OPC will be updated.

Task 9: Final Design

Following the 90% roadway design review meeting, Olsson will begin the Final level design and plan production. Comments supplied by the City will be incorporated into the design and tracked via a comment response form. The final package will be stamped and signed by a licensed Colorado PE. If it is determined that project advertisement is impending the stamping and signing will not occur until a for Construction plan set is developed following advertisement. Project specifications and OPC will be finalized and included with the final submittal.

PREVIOUS PROJECTS

Our previous successes prove that we take the right approach on our projects. Below are some examples with similar elements to the Leyden Road project that show what we can do for you.

8th Street Engineering Design and Construction Administration Services; Greeley, CO

The City of Greeley initiated this project to widen 8th Street between State Highway 85 and Basalm Avenue to accommodate recent and future growth. The plan was to have one consultant take the project from preliminary design through final design and construction, but issues arose in the beginning of the project and never improved with the city's selected consultant. Once the designs reached 75%, the city re-advertised the project, hoping for another collaborative partner to pick up the project and ensure their vision was fulfilled - and that's where Olsson came in.

Olsson validated the existing designs and reports and finalized the engineering designs, including suggestions to improve upon the previous consultant's ideas. In addition, our water resources team also came up with a creative solution to take into account recent FEMA floodplain revisions in the area that were of concern to the city. We provided geotechnical engineering services on an ongoing basis throughout the project site. Our familiarity with the area allowed us to provide more context-sensitive solutions that more fully realized the goals of the project.

Once designs were finalized, we leveraged our full-service capabilities to provide construction services, including construction administration, management, and inspection. This project was completed on time with design and construction services and overall construction costs all under budget.

RELEVANCE TO LEYDEN ROAD DESIGN

- Collector roadway
- Value Engineering
- Context-sensitive solutions

KEY STAFF INVOLVED

- Matt Olsson
- Michelle Danaher

REFERENCE

Steven Younkin, 970.373.6281,
steven.younkin@greeleygov.com



Wadsworth Path, 32nd Avenue to 35th Avenue

The City of Wheat Ridge selected Olsson to provide engineering, environmental, and right-of-way acquisition services for constructing a shared-use path on the west side of Wadsworth Boulevard, between 32nd and 35th Avenues. In addition to the shared-use path, this project involves reconstructing approximately 500 feet of concrete box culvert that channels the Rocky Mountain Ditch, as well as extending a culvert beneath Wadsworth Boulevard. Federally funded, the project requires Olsson's expertise in navigating the CDOT Local Agency process. Similar to the Leyden Road project, coordination with the ditch company is vital to align the proposed improvements with standards and schedule construction during the typical shutdown period. The project area includes several potentially historic resources, such as the Rocky Mountain Ditch, necessitating Olsson's involvement in obtaining environmental clearance. Olsson's responsibilities encompassed topographic and boundary surveys; multimodal design; hydrology and hydraulics; structural design; plan preparation for street light design, construction phasing, and utility coordination; bidding assistance; environmental clearances; and post-design support.

Olsson is anticipating that this project will be completed under budget and on schedule with construction commencing later this fall.

RELEVANCE TO LEYDEN ROAD DESIGN

- Irrigation Ditch coordination
- Environmental permitting
- Multimodal improvements
- ROW plan development

KEY STAFF INVOLVED

- Lee Kunselman
- Matt Olsson
- Eli Donaldson

REFERENCE

Dan Klenjoski, 303.235.2868,
dklenjoski@ci.wheatridge.co.us

Highlands Ranch Parkway Improvements; Douglas County, CO

The Highlands Ranch Parkway project addresses the complexities of the reconstruction of a busy, arterial road with high traffic volumes and a 45 mph speed limit. Douglas County had completed a transportation master plan that called for changes to the existing roadway cross section. Olsson was called upon to develop and analyze alternatives for pavement treatments, improve multimodal connectivity and lane configurations.

Following the initial data collection, Olsson provided a range of essential services. These included Subsurface Utility Engineering to map underground utilities (performed by T2), identify required temporary construction easements and coordinate across multiple County agencies. Lee and the Olsson Road & Bridge team developed three typical section alternatives with varying travel lane widths, median/turn lane treatments, bike lanes and attached sidewalk configurations. Furthermore, Olsson explored various intersection alternatives, evaluating options for pedestrian and bicycle safety due to the large crossing lengths, high traffic volumes and posted speed limit. The project also encompassed detailed Roadway Design, progressing through 30%, 90%, and 100% design levels, producing comprehensive plan, specifications and opinion of probable cost (OPC). New traffic signal design for Ridgeglen Way was also part of the scope and the reconstruction of the Burntwood traffic signal was added to provide an extended longevity of this important route. The culmination of these efforts is a complete, construction-ready document package for advertisement in February 2026.

RELEVANCE TO LEYDEN ROAD DESIGN

- Value Engineering alternatives analysis of roadway typical section, pavement treatments
- Multimodal improvements
- Design led by a planning document

KEY STAFF INVOLVED

- Lee Kunselman
- Matt Olsson
- Eli Donaldson

REFERENCE

Amy Strouthopoulos, 720.467.3222,
astrouthopoulos@douglas.co.us

Baseline Road Phase 2 Enhanced Transit Stops and Bike Lanes; Boulder, CO

Olsson led the Baseline Road Transportation Safety Project, a multi-year initiative to improve safety along Baseline Road, one of Boulder's most heavily traveled corridors. This section of Baseline Road, spanning from 30th Street to Foothills Parkway, serves many key community destinations, including affordable housing, grocery stores, health centers, and University of Colorado Boulder student housing. According to the city's 2022 Safe Streets Report, this stretch is among the top 10 crash locations for pedestrians and cyclists and is part of the Denver Regional Council of Governments' Regional High Injury Network, which identifies roads with high rates of severe injury and fatal crashes.

As part of the city's Core Arterial Network (CAN) initiative, the project aims to reduce serious crashes and enhance multimodal safety with features such as protected intersections, signalized mid-block crossings, tall curb-protected bike lanes, and floating bus stops to improve transit efficiency. By implementing these improvements, this project will create safer conditions for walking, bicycling, and driving on Baseline Road while enhancing connections to popular community destinations. This project followed the CDOT Local Agency Process and was completed in September 2025.

A VE process took place to determine the preferred alternative for this heavily traveled vehicle and multimodal corridor. Through multiple meetings, options development and analysis the concept design was vetted and taken forward into PS&E delivery.

RELEVANCE TO LEYDEN ROAD DESIGN

- Collaborative development of options
- Safety improvements
- Roadway and multimodal options analyzed
- VE/alternatives analysis

KEY STAFF INVOLVED

- Matt Olsson
- Eli Donaldson

REFERENCE

Brian Wiltshire, 303.441.1978,
WiltshireB@bouldercolorado.gov



State Highway 257 and Eastman Park Drive Intersection Improvements; Windsor, CO

The Town of Windsor received federal funding to correct a geometric deficiency at the intersection of State Highway 257 and Eastman Park Drive. This project called for relocating the northbound traffic signal and the eastbound traffic signal poles (east side of the intersection) to the east to create a larger turning radius for heavy trucks. The project was flanked on the west side by the Great Western Railroad (GWR), which presented a significant design constraint that our team was able to successfully navigate. Our transportation staff completed an alternative analysis, made design recommendations, and prepared construction plans and documents in support of this CDOT Local Agency project. Moving the traffic signals allowed the relocation of the northbound through lane and shifted the northbound left-turn lane to the east. The redesigned intersection included ADA compliant bike and pedestrian facilities as well as slip lanes and median islands.

Olsson's team possesses a remarkable ability to adapt or pivot intersection design plans, accommodating factors like adjacent property redevelopment, railroad requirements, utility relocations, and right-of-way acquisitions. Our flexibility was key to ensuring that the infrastructure design remained safe, functional and sustainable.

RELEVANCE TO LEYDEN ROAD DESIGN

- Safety improvements
- Roadway with challenging adjacent constraints
- Value Engineering/Alternatives Analysis

KEY STAFF INVOLVED

- Matt Olsson
- Courtney Wallace (P2P)

REFERENCE

Omar Herrera, 970.674.2437, oherrera@windsorgov.com

City of Arvada Transportation Experience

Olsson has partnered with Hg because of our long history together as firms, but also because of Kristi Garrison's successful experience on multimodal projects for the City. While with a previous firm, Kristi served as project manager and lead senior roadway engineer for the City of Arvada's multimodal on-call program, with a focus on pedestrian and bicycle facility planning and design. The work encompassed a diverse portfolio of projects ranging from conceptual studies through 100 percent final design. Assignments included the design of multimodal corridors along complex, high-volume roadways, as well as the development of safe mid-block pedestrian and bicycle crossings serving schools and parks. Collectively, these projects advanced the City's goal of strengthening community connectivity by creating slower, safer streets for pedestrians and cyclists throughout Arvada.

Kristi supported the following projects either as project manager, lead roadway engineer, or engineer-of-record:

- 63rd Avenue and McIntyre Street Conceptual Design and Traffic Study
- Arvada Center Sidewalk Design
- Little Elementary Curb Ramps on Otis Drive
- W 58th Separated Sidewalk: Van Gordon Street to Kipling Parkway
- W 68th Ave Sidewalk: Dover Street to Carr Street
- 84th Avenue and Alkire Street Rectangular Rapid Flashing Beacon
- Multimodal Improvements Along 66th Avenue and 64th Avenue: Highway 93 to Virgil Way

Fee Schedule / Cost Proposal

DESIGN SERVICES FOR LEYDEN ROAD IMPROVEMENTS - FEE ESTIMATE														
Task Description	Project Manager/ Lead Engineer	Senior Engineer	Project Engineer	Engineer	Associate Engineer	Assistant Engineer	Infrastructure Funding Specialist	Survey Technical Manager	Senior Surveyor	Senior Technician	Drone Pilot	2 Person Survey Crew	Administrative Coordinator I	Total
Rate	$295.00	$260.00	$210.00	$175.00	$160.00	$145.00	$140.00	$225.00	$175.00	$140.00	$250.00	$215.00	$89.00	
TASK 1 - PROJECT MANAGEMENT, COORDINATION, AND MEETINGS														
Project Management and Coordination	56				14								28	$21,252.00
Project Meetings	29		35	8										$17,305.00
Subtotal	85	0	35	8	14	0	0	0	0	0	0	0	28	$38,557.00
TASK 2 - PROJECT INITIATION, KICKOFF, AND CONCEPT PLANS														
Project Initiation and Kickoff	8		12	3				3						$6,080.00
Value Engineering/Conceptual Plans	27	2	60	32	56	16	10							$39,365.00
Subtotal	35	2	72	35	56	16	10	3	0	0	0	0	0	$45,445.00
TASK 3 - DATA ACQUISTION AND SURVEY														
Planning, Control, and Topographic Survey								14	146	308	10	140		$104,420.00
Subtotal	0	0	0	0	0	0	0	14	146	308	10	140	0	$104,420.00
TASK 6 - PRELIMINARY DESIGN														
Subtotal	0	44	68	44	164	124	0	0	0	0	0	0	0	$77,640.00
TASK 7 - 60% ROADWAY DESIGN														
Subtotal	0	58	60	104	188	148	0	0	0	0	0	0	8	$98,132.00
TASK 8 - 90% ROADWAY DESIGN														
Subtotal	0	52	44	88	188	112	0	0	0	0	0	0	4	$84,836.00
TASK 9 - FINAL DESIGN														
Subtotal	0	24	24	80	112	92	0	0	0	0	0	0	4	$56,896.00
TOTAL HOURS	120	180	303	359	722	492	10	17	146	308	10	140	44	
TOTAL LABOR FEE														$505,926.00
Expenses														
Survey Expenses														$3,150.00
Direct Expenses														$200.00
Subconsultants														
Rate	$339.30	$266.25	$228.63	$189.63	$163.11	$144.18								
Hg Consult (Value Engineering/Retaining Wall/Phasing/MOT)	84	23	372	210	60	205								
Subtotal														$199,042.00
Parcel2Permit Consulting (Property Acquistion and Annexation Services)														
(Appraisal reports or wavier valuations to be determined based on final design: Appraisals-$5000.00/ ea and Wavier Valuations-$1000.00/ea)														
Subtotal														$82,800.00
T2 Utility Engineers (SUE, QL-B & QL-A)														
Subtotal														$108,620.00
TOTAL FEE														$899,738.00

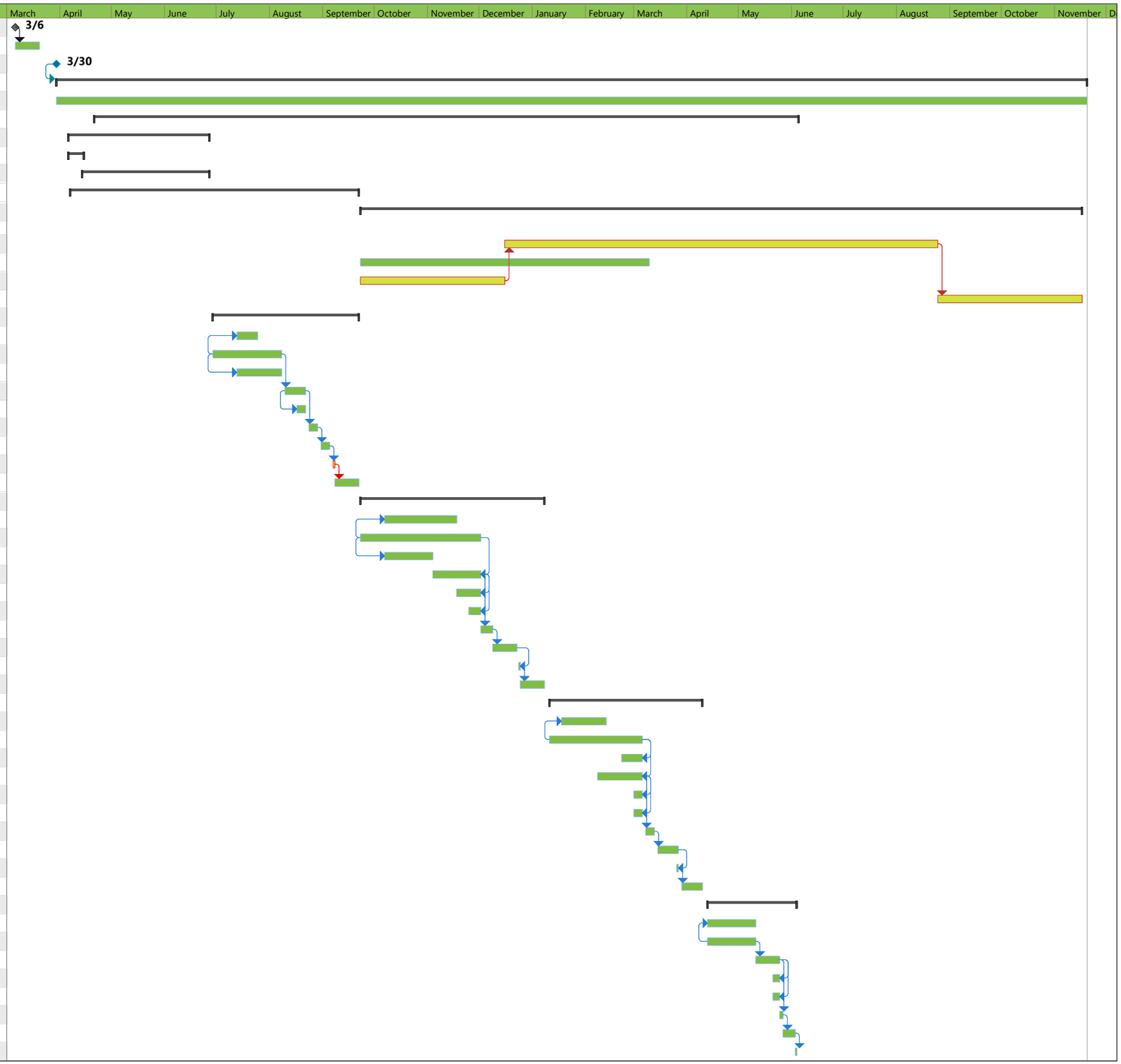
The cost proposal is based on the RFP and the associated requirements. Olsson believes that the fee can be reduced through thoughtful negotiators of the scope of work elements. Items for consideration:

- **Eliminate the 60% Roadway Design submittal and supplement with an over-the-shoulder review of the electronic design**
- **Coordinate/Partner with the survey firm that has performed the data acquisition and survey for Arvada. Build off of the existing data.**
- **Coordinate/Partner with the SUE firm that has performed the data acquisition for utilities. Build off of the existing data.**

Additional detail of the fee proposal is available upon request.

Schedule

ID	Task Name	Duration	Start	Finish
1	**Notice of Selection**	0 days	Fri 3/6/26	Fri 3/6/26
2	**Negotiations (SOW/Fee)**	2 wks	Fri 3/6/26	Thu 3/19/26
3	**Anticipated NTP**	0 days	Mon 3/30/26	Mon 3/30/26
4	**Project Management, Coordination, and Meetings**	**430 days**	**Mon 3/30/26**	**Fri 11/19/27**
5	Project Management and Coordination	21.5 mons	Mon 3/30/26	Fri 11/19/27
6	**Project Meetings**	**294 days**	**Tue 4/21/26**	**Fri 6/4/27**
35	**Project Initiation, Kickoff, and Concept Plans**	**60 days**	**Mon 4/6/26**	**Fri 6/26/26**
36	**Project Initiation and Kickoff**	**7 days**	**Mon 4/6/26**	**Tue 4/14/26**
39	**Value Engineering/Concept Plans**	**54 days**	**Tue 4/14/26**	**Fri 6/26/26**
49	**Data Acquisition and Survey**	**120 days**	**Tue 4/7/26**	**Mon 9/21/26**
52	**ROW Annexation and Acquistion and ROW Plan Preparation**	**300 days**	**Wed 9/23/26**	**Tue 11/16/27**
53	Acquisition of Right of Way	9 mons	Wed 12/16/26	Tue 8/24/27
54	Annexation	6 mons	Wed 9/23/26	Tue 3/9/27
55	Right of Way Survey and Plan Preparation	3 mons	Wed 9/23/26	Tue 12/15/26
56	Title Insurance and Closing Services	3 mons	Wed 8/25/27	Tue 11/16/27
57	**Preliminary Design**	**61 days**	**Mon 6/29/26**	**Mon 9/21/26**
58	Utility Coordination	2 wks	Mon 7/13/26	Fri 7/24/26
59	Preliminary Design	6 wks	Mon 6/29/26	Fri 8/7/26
60	Draft Drainage Report	4 wks	Mon 7/13/26	Fri 8/7/26
61	Preliminary Roadway Plan Package	2 wks	Mon 8/10/26	Fri 8/21/26
62	Opinion of Probable Cost	1 wk	Mon 8/17/26	Fri 8/21/26
63	QA/QC	1 wk	Mon 8/24/26	Fri 8/28/26
64	Address QC Comments	1 wk	Mon 8/31/26	Fri 9/4/26
65	Preliminary Design Submittal	1 day	Mon 9/7/26	Mon 9/7/26
66	Agency Review	2 wks	Tue 9/8/26	Mon 9/21/26
67	**60% Roadway Design**	**77 days**	**Wed 9/23/26**	**Thu 1/7/27**
68	Utility Coordination	6 wks	Wed 10/7/26	Tue 11/17/26
69	60% Design	10 wks	Wed 9/23/26	Tue 12/1/26
70	Updated Drainage Report	1 mon	Wed 10/7/26	Tue 11/3/26
71	60% Plan Package	1 mon	Wed 11/4/26	Tue 12/1/26
72	Specifications	2 wks	Wed 11/18/26	Tue 12/1/26
73	Opinion of Probable Cost	1 wk	Wed 11/25/26	Tue 12/1/26
74	QA/QC	1 wk	Wed 12/2/26	Tue 12/8/26
75	Address QC Comments	2 wks	Wed 12/9/26	Tue 12/22/26
76	60% Roadway Design Submittal	1 day	Thu 12/24/26	Thu 12/24/26
77	Agency Review	2 wks	Fri 12/25/26	Thu 1/7/27
78	**90% Roadway Design**	**65 days**	**Mon 1/11/27**	**Fri 4/9/27**
79	Utility Coordination	4 wks	Mon 1/18/27	Fri 2/12/27
80	90% Design	2 mons	Mon 1/11/27	Fri 3/5/27
81	Final Drainage Report	2 wks	Mon 2/22/27	Fri 3/5/27
82	90% Plan Package	4 wks	Mon 2/8/27	Fri 3/5/27
83	Specifications	1 wk	Mon 3/1/27	Fri 3/5/27
84	Opinion of Probable Cost	1 wk	Mon 3/1/27	Fri 3/5/27
85	QA/QC	1 wk	Mon 3/8/27	Fri 3/12/27
86	Address QC Comments	2 wks	Mon 3/15/27	Fri 3/26/27
87	90% Roadway Design Submittal	1 day	Fri 3/26/27	Fri 3/26/27
88	Agency Review	2 wks	Mon 3/29/27	Fri 4/9/27
89	**Final Roadway Design**	**38 days**	**Tue 4/13/27**	**Thu 6/3/27**
90	Utility Coordination	1 mon	Tue 4/13/27	Mon 5/10/27
91	Final Design	4 wks	Tue 4/13/27	Mon 5/10/27
92	Final Plan Package	2 wks	Tue 5/11/27	Mon 5/24/27
93	Specifications	2 days	Fri 5/21/27	Mon 5/24/27
94	Opinion of Probable Cost	2 days	Fri 5/21/27	Mon 5/24/27
95	QA/QC	2 days	Tue 5/25/27	Wed 5/26/27
96	Address QC Comments	1 wk	Thu 5/27/27	Wed 6/2/27
97	Final Roadway Design Submittal	1 day	Thu 6/3/27	Thu 6/3/27



LEE KUNSELMAN, P.E., PMP

Project Manager



EXPERIENCE SUMMARY

Lee has over 15 years of Project Management experience, specializing in delivering transportation infrastructure projects for public sector clients. With over 25 years planning, designing, delivering and managing transportation projects, he focuses on building strong teams and a structured yet inclusive approach to attaining client goals. Lee has played key roles on a wide range of projects across Colorado, including Pike Road Improvements for the City of Longmont that added roadway capacity, multimodal connectivity, and improved ADA pedestrian movements at intersections. Lee's expertise and passion is guiding teams through complex transportation challenges that provide municipalities with outcomes that fit their financial constraints.

PROJECT EXPERIENCE

- **Douglas County, Highlands Ranch Parkway, Broadway to Burntwood; Highlands Ranch, CO**
  - Project Manager: Roadway and sidewalk reconstruction. Value Engineering of typical section, pavement treatment, and multimodal alternatives.
- **City of Wheat Ridge, Wadsworth Path 32nd to 35th; Wheat Ridge, CO**
  - Project Support: CDOT Local Agency project to add a multi-use path along Wadsworth to improve multimodal mobility with numerous access points along the corridor requiring coordination and over 500 feet of irrigation ditch box culvert relocation.
- **Central Federal Lands Highway Division, Lion Boulevard Improvements; Springdale, UT***
  - Project Manager: Arterial roadway improvements to destination egress, parking, adjacent property access, and multimodal connectivity.
- **City of Longmont, Pike Road Improvements; Longmont, CO**
  - Project Manager: Roadway widening to facilitate addition of bike lanes, sidewalk and trail connectivity improvements, water quality feature design, utility relocations, intersection improvements, work within a FEMA floodplain.
- **City of Longmont, 2013 Flood Emergency Response; Longmont, CO***
  - Project Manager: Emergency response for structural integrity of bridges over the St. Vrain and Left Hand creeks, prioritized emergency access immediately following the flooding event.

** Previous Experience*

EDUCATION

- B.S., Civil Engineering, Colorado State University

PROFESSIONAL REGISTRATIONS

- Professional Engineer: CO, UT, WY, SD
- Project Management Professional: 2787302

CERTIFICATIONS/TRAINING

- Eagle Leadership, 2022
- Olsson Project Management, 2025

OLSSON EXPERIENCE

- 2025 to Present

OVERALL EXPERIENCE

- 2001 to Present

MATT OLSSON, P.E.

Roadway/Utility Coordination, Value Engineering



EXPERIENCE SUMMARY

Matt takes a progressive approach to transportation design, which promotes creative, technology-driven solutions to solve increasingly complex systems. Furthermore, Matt recognizes that transportation projects are about moving people, not just cars. He has completed design work all across the country, providing him with a diverse perspective. Matt has experience with roundabouts, traffic signals, roadway safety improvements, pedestrian safety improvements, and intersection reconfiguration. Matt is known for being attentive and responsive to his clients, providing requests and answers promptly. Matt will lead our design team because of his recent and relevant experience with both managing and designing multimodal focused roadway improvement projects across Colorado.

PROJECT EXPERIENCE

- **City of Greeley, 8th Street Engineering Design and Construction Administration Services; Greeley, CO**
  - Design Lead: Final engineering design to widen roadway to accommodate recent and projected growth, and accommodate recent FEMA floodplain revisions.
- **City of Boulder, Baseline Road Phase 2; Boulder CO**
  - Design Lead: Design to enhance multimodal safety with features such as protected intersections, signalized mid-block crossings, curb-protected bike lanes, and floating bus stops.
- **City of Wheat Ridge, Wadsworth Path 32nd to 35th; Wheat Ridge, CO**
  - Project Manager and Engineer of Record: CDOT Local Agency project to add a multi-use path along Wadsworth to improve multimodal mobility with numerous access points along the corridor requiring coordination and over 500 feet of irrigation ditch box culvert relocation.
- **Douglas County, Highlands Ranch Parkway, Broadway to Burntwood, Improvements; Castle Rock, CO**
  - Quality Control: Roadway and sidewalk reconstruction. Value Engineering of typical section, pavement treatment, and multimodal alternatives.
- **Town of Windsor, State Highway 257 and Eastman Park Drive Intersection Improvements; Windsor, CO**
  - Design Lead: CDOT Local Agency project for constrained intersection reconstruction including concrete pavement and detailed phasing plans with temporary shoo-fly detour. The project required coordination with an adjacent ongoing CDOT resurfacing project.

EDUCATION

- M.B.A., University of Colorado Denver
- B.S., Civil Engineering, Colorado School of Mines

PROFESSIONAL REGISTRATIONS

- Professional Engineer: AZ, CO, NE, WY

CERTIFICATIONS/TRAINING

- Stormwater Management Plans Preparer Training

OLSSON EXPERIENCE

- 2018 to Present

OVERALL EXPERIENCE

- 2016 to Present

MICHELLE DANAHER, P.E., CFM

Drainage



EXPERIENCE SUMMARY

Michelle has thorough experience in water resources engineering, including hydraulics and hydrology, channel design and restoration, hydraulic structures, drainage calculations and modeling, and plan production. Her responsibilities include hydraulic and hydrologic modeling, preparing drainageway master plans, delineating floodplains, storm drainage and water quality design, and preparing construction documents. Michelle has extensive experience working in and around Arvada through projects she's completed for Mile High Flood District, which will guide her drainage design.

PROJECT EXPERIENCE

- **City of Greeley, 8th Street Engineering Design and Construction Administration Services; Greeley, CO**
  - Design Engineer: Final engineering design to widen roadway to accommodate recent and projected growth, and accommodate recent FEMA floodplain revisions.
- **City of Aurora, Mississippi and Kenton Way Stormwater Improvements; Aurora, CO**
  - Design Engineer: Design of new box culverts and a special junction under the existing intersection to reduce or eliminate floodplain spill potential.
- **City of Thornton, Washington Street Widening, 158th to 160th Avenue; Thornton, CO**
  - Design Engineer: Drainage design to improve a two-lane rural roadway to a six-lane urban arterial. Included drainage improvements to a nearby creek to reduce the approximate floodplain.
- **Mile High Flood District (MHFD), Leyden Creek at Alkire Street Culvert Replacement; Arvada, CO**
  - Hydraulic Modeling: Evaluation and design to replace an existing culvert underneath Alkire Street to prevent overtopping during flooding events.
- **MHFD, Little Dry Creek Master Drainage Plan and Flood Hazard Area Delineation; Adams County, Arvada, and Westminster, CO**
  - Project Engineer: Assessment and development of master drainage plan and delineation of flood hazard area.
- **MHFD, Van Bibber Creek Alternatives: Oak Street to Kipling Parkway; Wheat Ridge, CO**
  - Project Engineer: Hydraulic analysis of creek and development of alternatives analysis to reduce water surface elevations between Oak Street and Kipling Parkway.

EDUCATION

- B.S., Civil Engineering, Colorado School of Mines

PROFESSIONAL REGISTRATIONS

- Professional Engineer: CO

CERTIFICATIONS/TRAINING

- Certified Floodplain Manager

OLSSON EXPERIENCE

- 2015 to Present

OVERALL EXPERIENCE

- 2015 to Present

KRISTI GARRISON, P.E.

Multimodal, MOT/Phasing, Value Engineering



EXPERIENCE SUMMARY

Kristi is a skilled Project Manager who collaborates with clients, stakeholders, and designers to deliver positive changes to cities, counties, and communities. Kristi offers 12 years of experience in the design of roadways and active transportation. Throughout her career, Kristi has designed many local agency roadways and active transportation projects. She has managed projects and assisted in the development of a pavement management program with United Airlines. Kristi has served the City of Arvada (through another company) under your multimodal on-call contract, giving her relevant expertise for the needs of this particular project.

PROJECT EXPERIENCE

- **City of Arvada, On-Call Pedestrian and Bicycle Design - Safe Routes to School; Arvada, CO***
  - Project Manager and Senior Roadway Engineer: Conceptual and design plans focused on pedestrian and bicycle design. Select projects involved multi-modal paths along challenging and high-volume roadway corridors, while others were focused on safe pedestrian and bicycle mid-block crossings at schools and parks.
- **City of Arvada, 66th and Dunraven Street, 66th and Arvada Reservoir, 64th Avenue and W. 64th Parkway, 64th Avenue and Virgil Way; Arvada, CO**
  - Project Manager and Lead Senior Roadway Engineer: Analysis and conceptual design of multimodal connections focused on evaluating and implementing traffic signals, Rectangular Rapid Flashing Beacons, and improving ramps and pedestrian crossings to enhance pedestrian mobility and safety along this high-speed, free-flowing roadway.
- **Colorado Department of Transportation (CDOT), Colfax Multimodal and Safety Improvements; Aurora, CO**
  - Roadway Design Lead: Engineering design and final plans for two intersections, including ADA curb ramp design, pedestrian safety improvements, drainage improvements, and new signals. In some cases, the intersection footprint is expanding to include pedestrian refuge islands and a right turn separated lane.
- **El Paso County and the City of Colorado Springs, Marksheffel/ Meadowbrook Intersection; Colorado Springs, CO***
  - Lead Roadway Engineer: Design of a new signalized intersection at Marksheffel Road and Meadowbrook Parkway. This intersection involved new signals, roadway widening, and drainage design.

** Previous Experience*

EDUCATION

- B.S., Civil Engineering, Colorado State University

PROFESSIONAL REGISTRATIONS

- Professional Engineer: CO, MT, UT, WY

HG CONSULT EXPERIENCE

- 2024 to Present

OVERALL EXPERIENCE

- 2014 to Present

Hg Consult Inc

STEPHEN FUSSNECKER, P.E.

Structural Engineering, Value Engineering



EXPERIENCE SUMMARY

Stephen has 18 years of experience in bridge and retaining wall design, analysis, drafting, inspection and load rating. His experience includes 6 years as a Design Engineer and Bridge Technician for CDOT. He has supervised and performed bridge load ratings for hundreds of structures of varying types and complexity, including pedestrian facilities. He served as lead structural reviewer for multiple state and local agencies for bridge and retaining wall projects including constructability and biddability plan reviews. **[need a sentence about "connection with Brian" that Kristi mentioned in an email?]**

PROJECT EXPERIENCE

- **City of Trinidad, Santa Fe Trail Project; Trinidad, CO**
  - Project Manager and Bridge Designer: Design for a pedestrian bridge, culvert extension, and both cast in place and MSE retaining walls for this trail project.
- **Colorado Department of Transportation (CDOT), State Highway 58 over Ford Street Bridge Replacement; Golden, CO**
  - Bridge Technician: Draft curved 3-span prestressed bridge and design 5 block facing MSE walls.
- **CDOT, Wall E Repair; Westminster, CO**
  - Bridge Technician: Inspection, design, and drafting of a failed block facing MSE wall.
- **HEI Civil, Terrain North Basin; Castle Rock, CO**
  - Project Manager and Designer: Independent design review of cantilever CIP retaining wall.
- **Indiana Department of Transportation, EE-010 Culvert Replacement; Hendricks County, IN**
  - PRoject Manager and Bridge Designer: Structural, roadway, traffic, and grading designs and drafting for a concrete box culvert replacement.
- **City of Shawnee, 71st and Gleason Stormwater Project; Shawnee, KS**
  - Bridge Engineer: 2-cell 10'x6' concrete box culvert and 3 cantilever CIP retaining wall designs.
- **New Mexico Department of Transportation, Las Cruces Retaining Wall Design; Las Cruces, NM**
  - Structural Engineer: 2 CIP cantilever retaining wall designs in front of abutment and along I-25 at both ends of bridge.

EDUCATION

- B.S., Mechanical Engineering, University of Colorado-Denver

PROFESSIONAL REGISTRATIONS

- Professional Engineer: CO, TX, AZ, NM, WY, IN, KS, MS, IA

CERTIFICATIONS/TRAINING

- Federal Highway Administration-National Highway Institute (FHWA-NHI) Engineering Concepts for Bridge Inspectors
- FHWA-NHI Safety Inspection of In-Service Bridges
- FHWA-NHI Bridge Inspection Refresher Training
- FHWA-NHI Inspection of Ancillary Highway Structures

HG CONSULT EXPERIENCE

- 2022 to Present

OVERALL EXPERIENCE

- 2008 to Present

Hg Consult Inc

REQUIRED VENDOR SUBMITTAL FORM

SUBMITTED BY:

Company Name: Olsson, Inc.

Contact Names: Sales/Customer Service Lee Kunselman, P.E.

Address: 1525 N. Raleigh Street, Suite 400, Denver, CO 80204

Phone: (303) 374.3191 Email(s): lkunselman@olsson.com

The undersigned hereby affirms that:

- They are a duly authorized agent of the vendor;
- They have read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accepts and acknowledges this offer is consistent with the specifications and terms and conditions, unless specific variations have been clearly and expressly listed in the offer.
- The Offer is in all respects fair, without outside collusion or otherwise illegal action.

By: _____	2/2/2026	470781766
Signature of Authorized Agent	Date	FEIN
Lee Kunselman	Project Manager	lkunselman@olsson.com
Typed/Printed Name of Agent	Title of Agent	Agent email

Type of Business: Corporation, State of Incorporation Nebraska Partnership (general) Partnership (limited) Sole Proprietorship Limited Liability Company Other _____

Address of main business office, principal factory, or warehouse if different from above:
601 P Street, Suite 200, Lincoln, NE 68508

Principal line of business: Professional engineering services

Number of years in present business: 70

REFERENCES:

☐ Check here if Firm's standard reference sheet is attached, otherwise, use the space below.

Name: See discipline sections. Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

Name: See discipline sections. Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

References continued:

Name: See discipline sections. Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

_____

PAYMENT TERMS: If the vendor does not accept a percentage discount, the City standard is net thirty (30) days after the date that the City receives an accurate invoice and has accepted the product or service. Payment is the date of the check mailing or date of the credit card transaction.

Discount: ____% ____ Days, Net: 30 Days, Accept Visa without additional fee? No

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below, unless otherwise directed in Administrative Information, with each section clearly identified. **Missing information or required documents may result in submission being deemed non-responsive.**

- ☒ Submit **one** pdf document, unless instructed to include Excel file of Bid Schedule, on-line at BidnetDirect.com (File Name: Company name – Solicitation number)
  - ☒ Cover & Executive Summary
  - ☒ Detail Firm's and employees' Capabilities, Experience, Licensing, and Certifications
  - ☒ Details of Proposal – Proposed products & services, implementation timeline and warrantees
  - ☒ Fee Schedule/Cost Proposal
  - ☒ Previous projects of similar size and scope, with references
  - ☒ Completed signed Required Vendor Submittal Form, Performance Measures Forms and any other attachments requested.
  - ☒ Attach Firm's licensing or certifications

CONFIRM:

- ☒ CONFIDENTIAL information, if any, MUST be stamped as such on each page and submitted separately.
- ☐ VARIATIONS: Checking this box indicates that the vendor has variations to this solicitation. Identify all variations and exceptions to this solicitation on a separate sheet/s of paper. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation. For each variation listed, reference the applicable section of the solicitation document, the page number, and the variance. Submittal of a Vendor Contract is considered excessive in Variations and may be cause for determining that the Bid/Offer is non-responsive and ineligible for award.
- ☒ Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable unless listed as a variation.
- ☒ Initial to acknowledge receipt of Addenda, if any:

  #1 LK _____ #2 _____ #3 _____

VENDOR NAME: Olsson, Inc. **SOLICITATION # 26-ENG-001**

Design Services Leyden Road Improvements

PERFORMANCE MEASURES FORM INSTRUCTIONS:

The City has incorporated Performance Management into its organizational culture. When vendors submit offers to the City in response to solicitations for ***Services*** (not associated with the primary purchase of goods, supplies, or software), they shall identify the methods and goals by which the City will monitor and report on the Vendor's performance providing those services to the City. Vendor's performance shall be documented as to (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation.

1. Vendor will define 1-2 measures for (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation, that follow S.M.A.R.T goals: Specific, Measurable, Achievable, Relevant, and Timely, per category.
2. The awarded vendor will be evaluated by the City per these defined metrics 2 months prior to contract renewal.
The department will review with the vendor any measures needing improvement.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than $15,000.

(a) Price/Cost

Example Measure: Consultant will submit detailed invoices substantiating amounts requested.

1. We (Olsson, Inc.) submit monthly progress reports with the detailed invoices and QA/QC the billed items prior to ensure clarity and correct task assignments. Invoices will include budget status by task and show both the amount spent and the amount remaining.
2. We will promptly notify the City if/when tasks arise that are not covered by the scope and fee to review and discuss next steps. We will do within three business days of our awareness. We will also notify the City within three business days if individual task budget is expected to remain for potential allocation to other tasks.

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant's Project Manager.

1. We will hold weekly meetings to update the City of progress, current work in progress, and items to bring to the City's attention (i.e., items that require City input or decisions, schedule limiting tasks, etc.)
2. We will submit an updated project schedule with each monthly reporting packet.

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

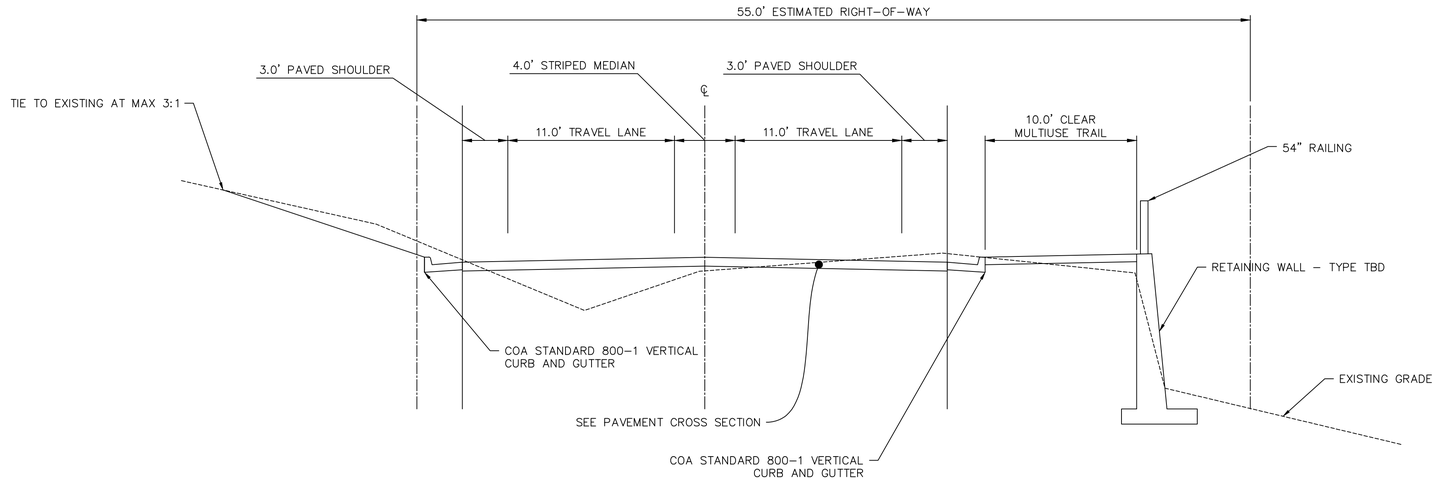
1. We will continuously update our decision log with assumptions and decisions required to complete each deliverable. We will provide the updated log to the City upon request within 24 hours.
2. We will complete revisions to each deliverable within two weeks and will facilitate no more than two revision rounds per TM, and no more than three for the final report.

(d) Sustainability and/or Innovation

Example Measure: Digital reports delivered to the City 95% of the time will to reduce the use of paper.

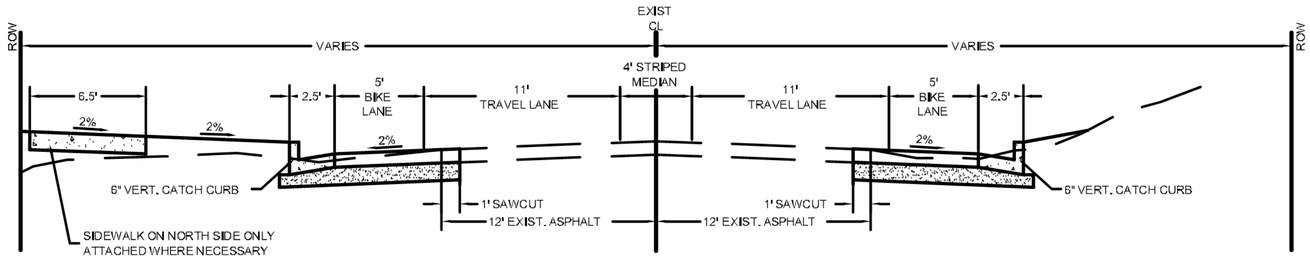
1. We will only provide hard copies of deliverables upon request, with the exception of the project initiation meeting agenda.
2. We will conduct more than 75% of our meetings virtually to reduce car travel.

Performance measures will be queried for every year of the contract. Performance measures reporting will be considered when renewing or awarding a contract with a vendor.



W. 82ND AVENUE
ORION WAY TO INDIANA STREET

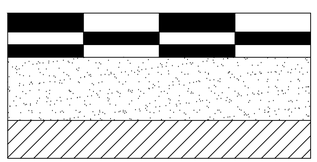
FACING EAST
CONCEPTUAL ONLY. CROSS SECTION TO BE EVALUATED.



W. 82ND AVE. TYP. SECTION

W. 82ND AVE. FROM QUAKER STREET TO INDIANA STREET

FROM DEVELOPMENT AGREEMENT AND TRAFFIC IMPACT FEES



3" SMA (¾")(75)(76-28)
4" HOT MIX ASPHALT (GRADING S)(75)(64-22)

10" ABC (CLASS 6)

6" SUBGRADE COMPACTION AND MOSIUTRE CONDITION

FULL DEPTH PAVEMENT SECTION FOR ORION WAY TO INDIANA STREET
N.T.S.

NO.	REVISION	DATE	BY
1			
2			
3			
4			
5			

Public Works Department
Engineering Division
8101 Ralston Road
Arvada, Colorado 80002
Phone 720-898-7640

CITY OF ARVADA

PROJECT NO. 25-ST-20
LEYDEN ROAD WIDENING PROJECT
CONCEPT PLAN
TYPICAL CROSS SECTIONS

ENGINEER
CHECKED BY
DESIGN BY

SHT 1 1

Geotechnical Investigation and Pavement Design Report
West 82nd Avenue (Leyden Road) Project
Arvada, Colorado
City of Arvada Project No. 25-ST-05



Prepared for:

City of Arvada
Public Works Department – Traffic and Transportation
8101 Ralston Road,
Arvada, Colorado 80002

Attention: Mr. Brian Lavey
Civil Engineer II Transportation

May 30, 2025

Prepared by:

RockSol Consulting Group, Inc.
12076 Grant Street
Thornton, Colorado 80241
(303) 962-9300

RockSol Project No. 672.07

DRAFT

Geotechnical Investigation and Pavement Design Report
West 82nd Avenue (Leyden Road) Project
Arvada, Colorado
City of Arvada Project No. 25-ST-05

Prepared for:

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Public Works Department – Traffic and Transportation
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Arvada, Colorado 80002

Attention: Mr. Brian Lavey
Civil Engineer II Transportation

May 30, 2025

Prepared by:

RockSol Consulting Group, Inc.
12076 Grant Street
Thornton, Colorado 80241
(303) 962-9300

RockSol Project No. 672.07

DRAFT

Madison Philips, PE
Geotechnical Engineer

Ryan Lepro
Senior Engineering Geologist

Reviewed By:

Donald Hunt, PE
Senior Geotechnical Engineer

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ATTACHMENTS

Figures 1 – 8: Borehole Location Plans
Appendix A: Legend and Individual Borehole Logs
Appendix B: Laboratory Test Results
Appendix C: PAVEXpress Output Sheets (Asphalt Pavement Alliance)
Appendix D: ICON Exhibit 1: Alternative 1,10-year Capacity full replacement

DRAFT

1.0 PROJECT PURPOSE AND DESCRIPTION

This report documents the geotechnical investigation performed by RockSol Consulting Group, Inc. (RockSol) to assist the City of Arvada (City) with the proposed improvements of West 82nd Avenue (Leyden Road) from State Highway 93 (SH93) to Indiana Street in Arvada, Colorado. The City is planning to widen Leyden Road to include bike lanes, shoulder, curb/gutter, and sidewalks. A new concrete box culvert (CBC) is also planned for the Leyden Creek crossing beneath Leyden Road near the Pattridge Park Trailhead parking lot, between SH93 and Culebra Street.

In addition, the widening of Leyden Road will likely require retaining walls along the alignment (south side of Leyden Road from approximately Orion Way to 82nd Place) as the slope along Leyden Road drops off steeply from the shoulders on the south side in some locations (see Image 1).



Image 1 – Example of Typical Cut and Fill Slopes Along Leyden Road (Looking East)

The scope of work for this geotechnical investigation included:

- Preparing a drilling/sampling program in coordination with the City of Arvada to perform a geotechnical and pavement investigation and implementing the program to collect soil samples for laboratory testing.
- Performing laboratory tests and analyzing the data.
- Preparing a subsurface investigation report presenting the field and laboratory data obtained, geological conditions, pavement design recommendation, geotechnical retaining wall and concrete box culvert (CBC) foundation recommendations, and earthwork recommendations.

2.0 PROJECT LOCATION AND GENERAL SITE CONDITIONS

The proposed improvements of Leyden Road extend from State Highway 93 (SH93) to Indiana Street in Arvada, Colorado. Leyden Road currently exists as a two-lane road with a variety turn lanes and acceleration lanes at intersections along the project alignment. Detached sidewalks, bike lane striping, center medians, and curb and gutter exist between 3rd Avenue and just west of Culebra Street. A pedestrian underpass structure is located between Leyden Rock Drive and 3rd Avenue. Leyden Creek is located on the north side of Leyden Road between SH93 and Pattridge Park Trailhead parking lot, where it crosses underneath Leyden Road within two corrugated metal

pipes then runs on the south side of Leyden Road within the remaining project limits. Church Ditch is located on the south side of Leyden Road from Orion Way to Indiana.

3.0 GEOLOGICAL SETTING

Based on the United States Geologic Survey (USGS) Surficial and Bedrock Geologic Map of the Golden Quadrangle, Jefferson County, Colorado, by Richard Van Horn, dated 1972 (Images 2 and 3), the project site is mostly underlain by Colluvium (Qco) which generally consists of clayey to sandy silt and may contain boulders. Additionally, areas of Post-Piney Creek alluvium (Qp), Younger alluvial fan (Qyf), Artificial fill (af), and Landslide deposits (Ql) are mapped within the project area. The Landslide deposits (Ql) consist of disoriented blocks, bedrock, or surficial deposits comprised predominately of silt and clay sized particles but may contain boulders.

Sedimentary bedrock identified as the Arapahoe, Laramie, Fox Hills Formations by the USGS is mapped within the project limits. Tertiary age intrusive mafic monzonite is also mapped at the western project limits.

A claypit is identified on the south side of Leyden Road, approximately 900 feet east of State Highway 93 within the bedrock outcrops.

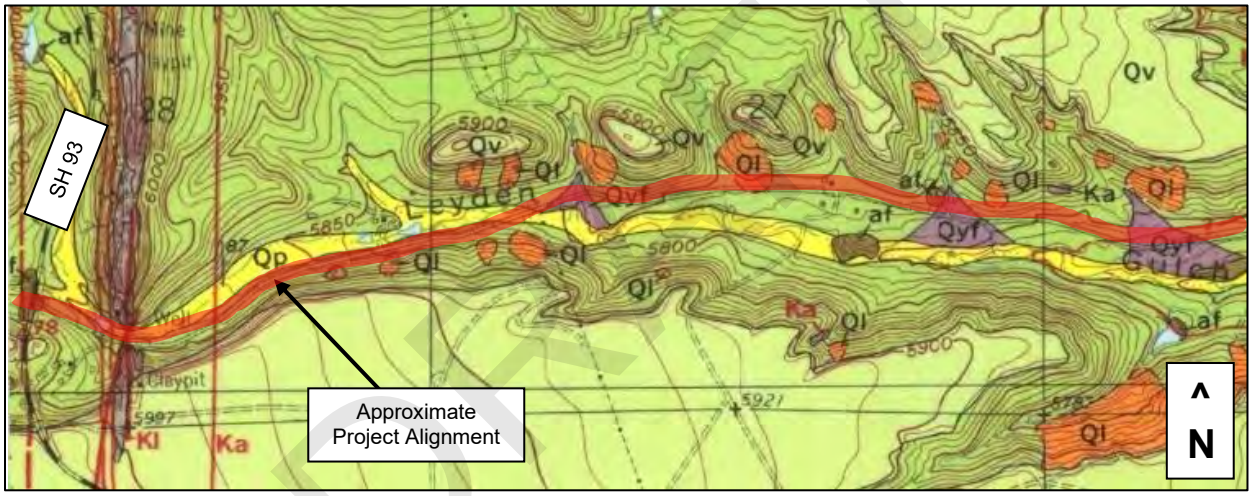

Image 2 – Site Geology Map (USGS) From SH 93 to Yule Way

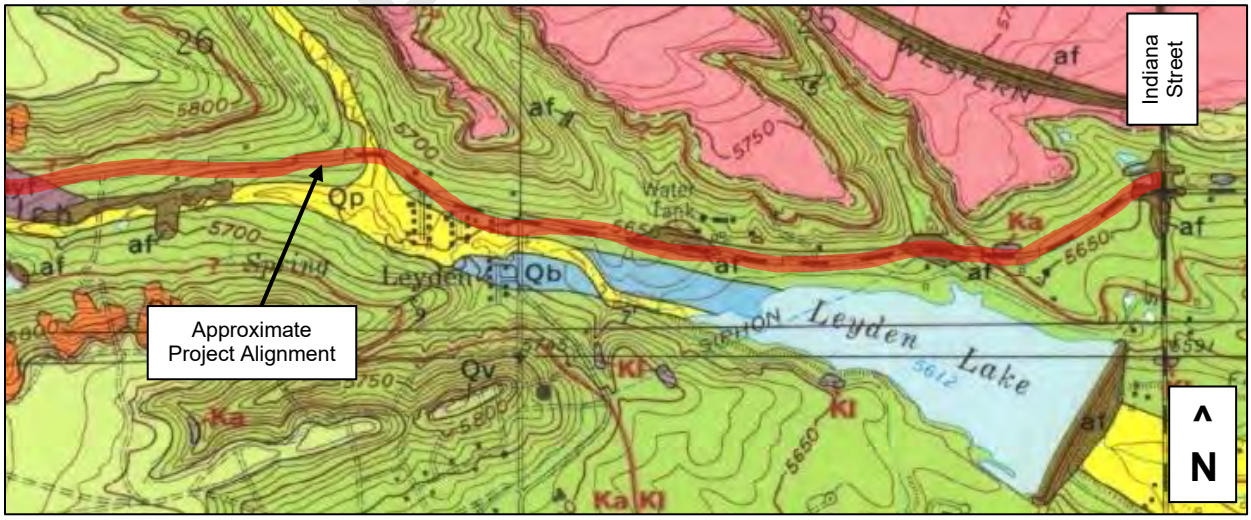

Image 3 – Site Geology Map (USGS) From Yule Way to Indiana Street

Based on the 1983 Colorado Geological Survey (CGS) *Colorado Front Range Inactive Coal Mine Data and Subsidence Information, Jefferson County* (Plate 9 of 12), by J.E. Turney and L. Murray-Williams, the middle portion along Leyden Road overly abandoned coal mines or coal mine adits/entrances (see Image 4). The Leyden Coal Mine was operated by the Leyden Coal Company between 1903 and 1950. The mine consisted of four shafts providing the access to two flat-lying coal seams from 790 feet to 855 feet below the surface in the Late Cretaceous Laramie Formation. It was a room and pillar operation with an estimated recovery of about 35 percent.

As a result of collapse of abandoned coal mines over time, a potential of subsidence can pose a risk to structures, roadways and utilities built above and within a short lateral distance of undermined areas. The risk is higher in areas where there is minimal depth of cover above the abandoned coal mines or where coal mine shafts/adits/openings exist. A mine subsidence evaluation was not included in the scope of work for this study; however, based on our document review and the reported depth of the Leyden Coal Mine, it is RockSol's opinion that the risk to structures, roadways and utilities built above and within a short lateral distance of undermined areas is low.

Practical auger refusal from unknown material (possibly concrete debris) was encountered in Boreholes P-17 and P-31. No other indications of coal mine workings were noted during the drilling and sampling operations to the maximum depths explored, approximately 10 feet to an approximate depth of 25 feet below grade.

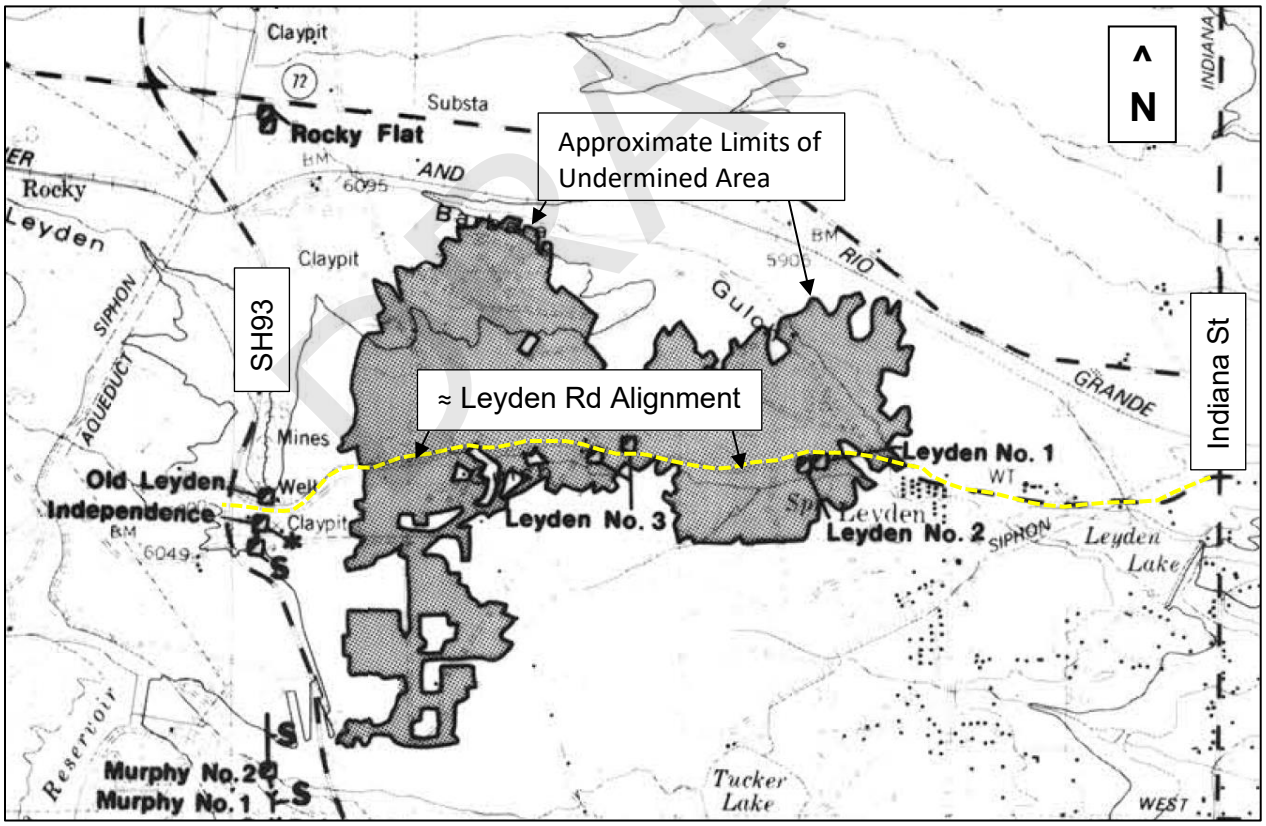

Image 4 – CGS Map of Leyden Coal Mine

4.0 SUBSURFACE EXPLORATION

For this investigation, RockSol completed 41 boreholes identified as C-1, C-2, and P-1 through P-33 for characterization of the subsurface conditions for this widening project. Pavement boreholes identified as P-1 through P-33 were spaced approximately every 500 feet from east of State Highway 93 to Culebara Street and from 82nd Place to Indiana Street, spaced every 1,000 feet from Culebara Street to Orion Way, and spaced every 400 feet from Orion Way to 82nd Place (Image 6). Additional boreholes will be placed between the 400-foot spaced pavement boreholes during a second round of drilling once the location of the retaining walls have been established. Two boreholes identified as C-1 and C-2 were drilled at the existing location of the Leyden Creek culvert near the Pattridge Open Space parking area (see Figures 1 – 8 and Images 4 through 7).



Image 4



Image 5



Image 6



Image 7

Two borehole locations (P-22 and P-26) were not drilled due to overhead and/or underground utility line conflicts. Several high profile (high pressure gas and a 36-inch water line) utility lines required a significant (greater than 18-inches) offset away from the utility lines which could not be accomplished without closing both directions of travel, which was not permitted.

Boreholes P-1 through P-23 and P-30 through P-33 were completed to a maximum depth of 10 feet below existing grades for pavement design purposes. Boreholes P-24 through P-29 were completed to approximate depths of 20 feet to 30 feet below existing grades for potential retaining wall design. Boreholes C-1 and C-2 were completed to a maximum depth of 25 feet below existing grades.

The boreholes were completed in March and April 2025 with CME 55 and 75 truck mounted drill rigs using 4.25-inch outside diameter solid stem auger. The boreholes were logged in the field by a representative of RockSol with the depth to groundwater, if encountered, noted at the time of drilling. The boreholes were backfilled and patched with asphalt patch, where drilled within the existing pavement, at the completion of drilling operations. Terracon Environmental personnel also obtained various samples of soil from the RockSol boreholes during field operations to monitor the presence of volatile gases at the time of sampling using a PID instrument at borehole locations C-1, P-3 through P-9, P-25, and P-29 through P-32.

Subsurface materials were sampled and resistance of the soil to penetration of the sampler was performed using modified California barrel samplers. The modified California barrel sampler has an outside diameter of approximately 2.5 inches and an inside diameter of 2 inches. Brass tube liners were used with the modified California barrel sampler.

Penetration Tests were performed at selected intervals using an automated hammer lift system and were performed using the Modified California barrel sampler with a standard hammer weighing 140 pounds falling 30 inches per ASTM D3550. The Modified California barrel sampling method is similar to the Standard Penetration Test (SPT) described by ASTM Method D-1586 with the difference being the sampler dimensions and the number of 6-inch intervals driven with the hammer. Penetration resistance values (blow counts) were recorded for each sampling event. Blow counts, when properly evaluated, indicate the relative density or consistency of the soils.

Depths at which the samples were taken and the blow counts that were obtained are shown on the Boring Logs included in Appendix A. Soil descriptions of the subsurface materials encountered were recorded in the field logs based on ASTM D2488, Visual-Manual Procedure. Borehole ground surface elevations were approximated from the topographic plan provided by the City and are included on the Borehole Logs.

5.0 SURFICIAL AND SUBSURFACE CHARACTERIZATION

The surface and subsurface materials encountered by RockSol at our borehole locations included asphaltic pavement, aggregate base course, fill material, native soils, and sedimentary bedrock. Copies of the borehole logs are included in Appendix A. Pavement Core Logs of recovered pavement cores are presented in Appendix C.

5.1 Existing Asphalt Pavement Section and Condition

Full-depth asphalt pavement thickness for Leyden Road has an average of about 7.5 inches and ranges in thickness from 4.0 inches to 12.0 inches. Aggregate base course (ABC) was found in 14 of the 32 boreholes. The 14 boreholes with ABC had an average thickness of 4 inches and ranged in thickness from 2.0 inches to 9.0 inches.

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Based on field observations by RockSol, moderate to severe fatigue cracking, severe longitudinal and transverse cracking, edge cracking, and numerous potholes were noted within the eastern limits of the project (Leyden Rock Drive to Indiana Street), as shown in Images 8 through 11. The pavement within the western and middle portions of the project appeared to be in better condition with the typical environmental (temperature related) distresses consisting of low severity transverse and longitudinal cracking.


Image 8


Image 9


Image 10


Image 11

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5.2 Fill Materials

Fill materials encountered below the pavement section generally consisted of loose to dense silty to clayey sand with gravel and sandy clay in parts and stiff to very stiff sandy clay with silty to clayey sand and gravel in parts to approximate depths varying between 1 foot to 12 feet, below existing grades. The fill material appears to be roadway embankment placed for the construction of Leyden Road. Auger refusal was encountered at an approximate depth of 5.5 feet below existing grade at Borehole P-17 and 2 feet below existing grade at Borehole P-31. Possible concrete debris associated with historic mining operations/structures or roadway fill placement/construction is suspected to be the cause of the auger refusal.

5.3 Native Materials

Native materials encountered consisted of loose to medium dense clayey to silty sand with gravel in parts and medium stiff to very stiff clay with sand to sandy to slightly silty clay with silty to

gravelly sand in parts. The native soil extended to depths ranging between 6 feet to 20 feet below existing grades.

5.4 Sedimentary Bedrock

Sedimentary bedrock was encountered at nine borehole locations (C-1, C-2, P-12, P-25, P-28 through P-30, and P-32) at depths varying between 6 feet to 18 feet below existing grades. The sedimentary bedrock consists of hard to very hard silty to clayey sandstone and claystone, consistent with the USGS mapped sedimentary bedrock of the Arapahoe, Laramie, Fox Hills Formations. Tertiary age intrusive mafic monzonite is also mapped at the western portion of the project limits but was not encountered in the RockSol boreholes.

5.5 Groundwater

Groundwater was encountered at Borehole C-1 at 12.5 feet below existing grade and at Boreholes P-1 and P-3 at 5 feet below existing grades at the time of geotechnical drilling and sampling operations. Groundwater was not noted in any other of the RockSol boreholes completed for this study at the time of our drilling and sampling operations.

Groundwater elevations are subject to change depending on climatic conditions, Leyden Creek flow stages, local irrigation practices, changes in local topography, and changes in surface storm water management. Long-term monitoring of groundwater elevations is required to establish groundwater fluctuations.

6.0 GEOTECHNICAL LABORATORY TESTING SUMMARY

Soil samples retrieved from the borehole locations were examined by the project geotechnical engineer. Selected samples were tested and classified according to the Unified Soil Classification System (USCS). The following laboratory tests were performed in accordance with the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), and current local practices:

- Natural Moisture Content (ASTM D-2216)
- Percent Passing No. 200 Sieve (ASTM D-1140)
- Liquid and Plastic Limits (AASHTO T89/ Method A/T90)
- Dry Density (ASTM D-2937)
- Soil Classification (ASTM D-2487 and AASHTO M145)
- Gradation (ASTM D6913)
- Water-Soluble Sulfate Content (CDOT CP-L 2103)
- Water-Soluble Chloride Content (CDOT CP-L 2104)
- Standard Test Method for pH of Soils (AASHTO T289)
- Soil Resistivity (ASTM G57 - Soil Box)
- Resistance Value (AASHTO T-190)
- Swell Test (Denver Swell Test, modified from ASTM D-4546)

Laboratory test results were used to characterize the engineering properties of the subsurface material. CMT Technical Services performed the R-Value testing. RockSol performed the other laboratory tests identified above. Laboratory test results are presented in Appendix B and are summarized on the Borehole Logs included in Appendix A.

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7.0 SUBGRADE CHARACTERIZATION

Laboratory test results were used to characterize the engineering properties of the subsurface material encountered. For soil classification, RockSol conducted sieve analyses and Atterberg Limits tests. RockSol assigned R-Value testing based on the results of the soil classifications. Lab testing was also performed on selected samples to determine the water-soluble sulfate content of subsurface materials to assist with cement type sulfate resistance recommendations. A summary of the physical and chemical test results is included in Appendix B.

7.1 Roadway Subgrade Soil Classifications

Subgrade bulk samples within the upper four to fourteen feet were obtained at each borehole location and were tested for AASHTO soil classification. The subgrade soils tested included A-1-a, A-1-b, A-2-4, A-2-6, A-4, A-6, and A-7-6 AASHTO soil types. A summary of soil classifications, with their Group Indices is presented in Table 1.

Table 1 – Subgrade Soil Classifications

USCS Symbol	AASHTO Soil Classification and Group Index	Number of Samples
GP-GM	A-1-a (0)	1
SM, SC, SC-SM, SP-SM	A-1-b (0)	7
SC, SM, SC-SM	A-2-4 (0)	5
SC, SC-SM	A-2-6 (0,1)	8
SC, SC-SM	A-4 (0)	3
CL	A-6 (0,1,2,4,5,6,7,10)	13
SC, CL, CH	A-7-6 (4,7,8,12,14,15,16)	12

7.2 Swell/Consolidation Test Results

The swell tests were performed on samples taken from depths of 2 feet, 4 feet, and 9 feet below existing grades. Swell/consolidation test results ranged from 0.0 percent to 2.4 percent swell and 0.4 percent consolidation, indicating low risk from swelling soils. The swell test results are shown in Table 2, and are included on the borehole logs in Appendix A and on the laboratory test sheets in Appendix B.

Table 2 – Summary of Swell Test Results

Borehole I.D.	Sample Depth (feet)	Material Type	Surcharge Pressure (psf)	Swell (%)
P-2	2	CLAY, with sand	200	1.9
P-5	2	CLAY, sandy	200	1.6
P-7	4	CLAY, sandy	200	1.2
P-13	2	CLAY, sandy	200	0.0
P-15	4	CLAY, sandy	200	2.0
P-19	2	SAND, clayey	200	1.2
P-24	4	CLAY, sandy	500	0.6
	9	CLAY, sandy	1,000	-0.4 (consolidation)
P-27	9	CLAY, sandy	500	1.2
P-28	4	CLAY, sandy	200	1.7
	9	Interbedded Claystone/Sandstone Bedrock	1,000	0.2
P-32	4	CLAY, sandy	200	2.4

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7.3 Subgrade Support Test Results

To test the subgrade support characteristics, R-Value laboratory tests were performed on three combined bulk samples obtained from Boreholes P-1, P-12, P-14, P-15, P-23, and P-29 at approximate depths from 0 to 9 feet below existing grades. The R-value test report is included in Appendix B.

Table 3 – Summary of R-Value Test Results

Combined Boreholes	Sample Depth (feet)	AASHTO Classification	R-Value
P-1 and P-14	0.5 – 9	A-6 (5)	<5
P-12 and P-15	0.5 – 9	A-7-6(16)	<5
P-23 and P-29	0 – 4	A-6(2)	17

7.4 Water-Soluble Sulfate Content

Cementitious material requirements for concrete in contact with site soil or groundwater are based on the percentage of water-soluble sulfate in either soil or groundwater that will be in contact with concrete constructed for this project. The water-soluble sulfate concentration identifies the Sulfate Exposure Class, as recognized by CDOT and shown in Table 4 below, and in the CDOT Standard Specifications for Road and Bridge Construction, dated 2023 (CDOT Table 601-2).

Table 4 – Concrete Sulfate Exposure Class

Water-Soluble Sulfate (SO_4), in Dry Soil, (%)	Sulfate (SO_4), in Water, ppm	Sulfate Exposure Class
0.00 to 0.10	0 to 150	Class 0
0.11 to 0.20	151 to 1,500	Class 1
0.21 to 2.0	1,500 to 10,000	Class 2
2.01 or greater	10,001 or greater	Class 3

The concentration of water-soluble sulfates (percent by weight) measured in soil samples obtained in the upper 14 feet from RockSol's exploratory boreholes ranged from 0.00 to 0.56 percent (see Table 5). Based on the test results, RockSol recommends concrete placed for this project meet requirements for Class 2 sulfate exposure conditions.

Table 5 – Water-Soluble Sulfate Results

Borehole I.D.	Sample Depth (feet)	Water-Soluble Sulfate (%)	Sulfate Exposure Class
C-2	9	0.03	Class 0
	14	0.04	Class 0
P-3	0.67 – 4	0.02	Class 0
P-6	0.58 – 4	0.00	Class 0
P-9	0.81 – 4	0.02	Class 0
P-10	0.5	0.00	Class 0
P-12	1 – 4	0.05	Class 0
P-15	0.87 – 9	0.56	Class 2
P-18	1.17 – 9	0.08	Class 0
P-21	0 – 4	0.01	Class 0
P-24	0.54 – 4	0.01	Class 0
	5 – 10	0.00	Class 0
P-27	0.62 – 4	0.00	Class 0
P-30	1.12 – 3	0.00	Class 0
P-32	4	0.06	Class 0
P-33	1 – 4	0.23	Class 2

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Refer to CDOT's current *Standard Specifications for Road and Bridge Construction Section 601* for concrete mixtures that satisfy appropriate sulfate exposure Class requirements.

7.5 Corrosion Resistance Levels

Water-soluble chloride content and pH tests were also performed on individual and bulk samples obtained from the boreholes and are summarized in Table 6.

Table 6 – Corrosivity Test Results

Borehole I.D.	Sample Depth (ft)	Water-Soluble Chloride (% by weight)	Water-Soluble Sulfate (% by weight)	pH	CR Level
P-3	0.67 – 4	0.0375	0.02	8.4	CR 0
P-6	0.58 – 4	**0.0711**	0.00	8.0	CR 1
P-9	0.81 – 4	**0.2370**	0.02	8.1	CR 3
P-12	1 – 4	**0.1860**	0.05	8.1	CR 2
P-15	0.87 – 9	**0.0540**	**0.56**	8.1	CR 4
P-18	1.17 – 9	**0.0510**	0.08	**8.6**	CR 4
P-21	0 – 4	**0.1806**	0.01	8.2	CR 2
P-24	0.54 – 4	0.0420	0.01	**9.0**	CR 4
	5 – 10	0.0360	0.00	8.2	CR 0
P-27	0.62 – 4	0.0120	0.00	**9.2**	CR 6
P-30	1.12 – 3	0.0450	0.00	**8.9**	CR 4
P-33	1 – 4	0.0480	**0.23**	**10.5**	CR 6

Comparison of the test results of the sulfate, chloride, and pH testing performed with *Table 1 - Guidelines for Selection of Corrosion Resistance Levels as presented in the CDOT Pipe Materials Selection Guide,* dated April 30, 2019*,* suggests corrosion resistance (CR) levels ranging from CR 0 to CR 6. In Table 6, "bold" text is used to identify the test result variable that is contributing to the CR Level above 0.

Due to elevated sulfate content, careful consideration for material type should be accounted for when selecting construction materials and it should be noted that there is higher potential for metallic materials to experience corrosion.

In addition, electrical resistivity analyses were performed in the RockSol laboratory using the soil box method (ASTM G-57), as well as in the field using the M.C. Miller Soil Resistivity test kit equipment (see Section 6.0 of this report). The test results were referenced against *Table 2 – Minimum Pipe Thickness For Metal Pipes Based On The Resistivity And pH Of The Adjacent Soil* as presented in the *CDOT Pipe Materials Selection Guide,* effective April 30, 2015. Table 7 summarizes the resistivity and pH test results performed on bulk samples.

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Table 7 – Resistivity Test Results

Borehole I.D.	Sample Depth	Resistivity (Ohm-cm @ water content)	pH
P-3	0.67 – 4	890 @ 21.7	8.4
P-6	0.58 – 4	480 @ 26.4	8.0
P-9	0.81 – 4	200 @ 31.5	8.1
P-12	1 – 4	220 @ 45.2	8.1
P-15	0.87 – 9	360 @ 32.5	8.1
P-18	1.17 – 9	400 @ 42.9	8.6
P-21	0 – 4	220 @ 25.6	8.2
P-24	0.54 – 4	400 @ 20.6	9.0
	5 – 10	540 @ 31.2	8.2
P-27	0.62 – 4	1800 @ 18.3	9.2
P-30	1.12 – 3	670 @ 17.4	8.9
P-33	1 – 4	660 @ 30.9	10.5

Comparing the test results with AASHTO LRFD Bridge Design Specifications, Ninth Edition, Section 10.7.5, resistivity less than 2,000 ohm-cm indicates an aggressive condition. As such, steel pipes or other steel materials placed in the native soils are at risk of deterioration and corrosion for unprotected steel surfaces.

Lab test results are representative of soil in a saturated condition, illustrating a “worst case” scenario. Field testing is on soils at their natural, in-place moisture content.

Deterioration of steel pipes or other structural steel may be reduced by several methods including protective coatings, concrete encasement, cathodic procedures, use of special alloys, or increased steel area. Special care must be taken to avoid damaging protective coatings during handling and installation if they are used.

8.0 PAVEMENT RECOMMENDATIONS

Pavement thickness recommendations for the proposed Leyden Road widening and rehabilitation are based on the City of Arvada Engineering Code of Standards and Specifications, dated October 2, 2023, which is based on the 1993 AASHTO Guide for the Design of Pavement Structures. RockSol utilized the Colorado Asphalt Pavement Association’s recommended software PaveXpress for pavement design calculations. Exports of the design calculation sheets are included in Appendix C.

8.1 Traffic Loading

Leyden Road is designated by the City as a major collector. According to the City of Arvada Engineering Code of Standards and Specifications Section 728.04.01 Table Minimum Pavement Sections, this roadway classification requires a 20-year, minimum ESAL of 1,500,000 for new pavement. From a review of CDOT’s Online Transportation Information System’s traffic data for nearby traffic data collection stations on State Highway 93 and a review of Denver Regional Council of Governments traffic data on Leyden Road, an annual growth rate of 0.5% was used. Traffic counts and vehicle class distributions at the intersections of Leyden Road and Yule Way, and Leyden Road and Orion Way, were provided to RockSol by the City. Based on these traffic counts, vehicle class distributions, an annual growth rate of 0.5%, 20-year design life ESAL value of 1,346,000 was determined for input into the PaveXpress software in areas where new pavement is to be constructed.

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For the areas where a pavement overlay is being considered, a 10-year design life ESAL value of 623,000 was used for Leyden Road from Indiana Street to Culebra Way, and a 10-year design life ESAL value of 254,000 was used for Leyden Road from Culebra Way to SH 93. The pavement overlay design used a 0.5% growth rate.

8.2 Subgrade Characterization

Three R-value tests were performed on bulk samples obtained from our exploratory boreholes. Based on the results of R-Value testing, an R-Value of 5, with corresponding Resilient Modulus of 5,356 psi was used for pavement design purposes. Results of the R-Value tests are included in Appendix B.

8.3 Pavement Design Parameter Summary

A summary of the pavement design input parameters used to evaluate the pavement thickness for the widened areas and rehabilitation areas of Leyden Road is presented in Table 8.

Table 8 – Pavement Design Input Parameters

Pavement Design Parameter	
20-Year Design Life ESAL's	1,346,000
10-Year Design Life ESAL's (Indiana St to Culebra Way)	623,000
10-Year Design Life ESAL's (Culebra Way to SH 93)	254,000
Subgrade Resilient Modulus, M_R	5,356 psi
Serviceability Loss, (ΔPSI)	2.5
Overall Standard Deviation, S_O	0.44
New Pavement Reliability, (R)	90%
Overlay Pavement Reliability, (R)	85%
Structural Coefficient of HMA	0.44
Structural Coefficient of ABC	0.12

8.4 Widened Pavement Section Thickness Recommendations

RockSol understands new flexible pavement is planned in the areas where Leyden Road is to be widened. Based on CAPA's PaveXpress software, and the City of Arvada Engineering Code of Standards and Specifications, RockSol recommends **7 inches of HMA SX(75) 64-22 over 10 inches of CDOT Class 6 aggregate base course** in these areas. The PaveXpress pavement design output sheet for this design is shown in Appendix C. For a full-depth alternative, the City may consider **9.5 inches of HMA SX(75) 64-22 over the existing subgrade**. The PaveXpress pavement design output sheet for this design is shown in Appendix C.

Subgrade compaction and moisture conditioning of the upper 6 inches of existing soils following Table 17 in Section 12 of this report is recommended.

8.5 Rehabilitation Recommendations

Rehabilitation of the existing pavement on Leyden Road is also being considered by the City. Based on the existing pavement conditions, varying pavement ages, and our understanding of proposed improvements, three rehabilitation designs are discussed below for the western portion, middle portion, and eastern portion of Leyden Road.

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For the eastern portion of Leyden Road from Indiana Street to Leyden Rock Drive, RockSol recommends **full depth patching of areas with severe fatigue cracking, and then milling the entirety of the roadway 2 inches, followed by placing 2.5 inches of HMA SX(75) 64-22.** The PaveXpress pavement design output sheet for this design is shown in Appendix C. As an alternative to full depth patching the sever fatigue distress areas in the eastern section of Leyden Road, the City may consider full depth reclamation (FDR) or full depth removal and replacement with new pavement.

For the middle portion of Leyden Road from Leyden Rock Drive to Culebra Way, RockSol recommends **full depth patching of areas with severe fatigue cracking, and then milling the entirety of the roadway 2 inches, followed by placing 2 inches of HMA SX(75) 64-22.** The PaveXpress pavement design output sheet for this design is shown in Appendix C.

For the western portion of Leyden Road from Culebra Way to SH 93, RockSol recommends **full depth patching of areas with severe fatigue cracking, and then milling the entirety of the roadway 2 inches, followed by placing 3.5 inches of HMA SX(75) 64-22.** The PaveXpress pavement design output sheet for this design is shown in Appendix C.

For areas where an existing center median is to be removed, RockSol recommends matching the existing pavement section thickness.

9.0 LEYDEN CREEK CBC FOUNDATION RECOMMENDATIONS

A new CBC structure carrying Leyden Creek beneath Leyden Road is proposed as part of the Leyden Road Improvements project. RockSol completed two boreholes (C-1 and C-2) to evaluate the subsurface conditions at the proposed CBC structure. Copies of individual borehole logs are included in Appendix A and a Summary of Physical and Chemical Test Results is included in Appendix B.

Preliminary CBC Foundation Recommendations

Based on field observations and information gathered in Boreholes C-1 and C-2, standard CBC construction is appropriate at the proposed location. Based on the Leyden Creek Alternative Analysis – W 82nd Ave Alternatives Memorandum by ICON Engineering Inc. (dated December 12, 2024), the 10-year capacity design alternative, two new precast concrete box culvert (CBC) with dimensions of 3-feet high, 8-feet wide, and 46-feet long are planned at an approximate depth of 4-6 feet below the existing roadway surface (see Appendix D). RockSol recommends that the concrete box culvert be constructed per CDOT Standard Plan Number M-603-3 if precast, or M-601-1 if cast-in-place.

Minimum soil cover over the CBC must meet CDOT/AASHTO requirements and the top deck of the CBC must be designed for all earth loads and traffic loads. Appropriate scour protection must be provided.

Preliminary values for AASHTO LRFD strength limit state and service limit state methodology are presented in Table 9. A resistance factor of 0.45 is used to determine the factored bearing resistance for LRFD strength limit state evaluation.

Service limit state, service bearing resistance was correlated to estimated total settlement of less than ½-inch if constructed on at least 6 inches of class 6 aggregate base course (ABC) or 3 inches of lean concrete base, as per General Note 3 of CDOT Standard Plan Number M-603-3.

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Table 9 – Preliminary LRFD Bearing Resistance Recommendations

Location	Anticipated Bearing Elevation (ft)	Strength Limit State		Service Limit State
		Ultimate (Nominal) Resistance (ksf)	Factored Resistance (ksf)	Service Bearing Resistance (ksf)
Leyden Creek CBC under Leyden Road	4 feet to 6 feet below existing roadway grade	6.2	2.8	2.0

Control of Leyden Creek water flow at the foundation location will be required during construction. Permanent dewatering or subsurface drainage systems are not anticipated.

Lateral Earth Pressure Parameters

To assist with preliminary design of the CBC, lateral earth pressure parameters are presented in Table 10 for the existing soils encountered in Boreholes C-1 and C-2. Also included are parameters for CDOT Class 1 Structure backfill material.

Table 10 – Lateral Earth Pressure Parameters

Soil Type	Total Unit Weight (γ) pcf	Effective Friction Angle, ϕ' (degrees)	Undrained Shear Strength (psf)	Lateral Earth Pressure Coefficients (Note 1)		
				Active (k_a)	At-Rest (k_o)	Passive (k_p) (Note 2)
CDOT Class 1 Structure Backfill (CDOT Section 703.08)	125	34	0	0.28	0.44	3.54
(Fill and Native) SAND, silty to clayey with gravel	125	30	0	0.33	0.50	3.00
(Native) CLAY, sandy	125	22	300	0.46	0.63	2.20

Note 1: Based on Rankine Theory of earth pressure. For horizontal backslope and foreslope.
Note 2: Full value, no reduction applied.

CBC Backfill Recommendations

RockSol recommends backfill of the proposed CBC meets the requirements for CDOT Structure Backfill (Class 1) as indicated in Section 206 of the CDOT Standard Specifications for Road and Bridge Construction. Structure Backfill (Class 1) shall be compacted to a density not less than 95 percent of maximum dry density determined by AASHTO T180. Roadway embankment placed above the structure fill material shall be compacted to the requirements indicated in Section 203.07 of the CDOT Standard Specifications for Road and Bridge Construction.

10.0 PRELIMINARY RETAINING WALL DESIGN PARAMETERS

The widening of Leyden Road will likely require retaining walls along the south side of Leyden Road alignment from approximately Orion Way to 82nd Place, as the slope along Leyden Road drops off steeply from the shoulders on the south side. Retaining wall locations and wall heights

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have not been determined at the time of this evaluation. For preliminary design purposes, the preliminary geotechnical parameters discussed below are based on the proposed retaining walls being constructed at the base of the existing slopes with approximate wall heights on the order of four to six feet with backslope fill material properly benched into the existing slope behind the proposed wall.

Preliminary Bearing Resistances

Based on conditions encountered by RockSol at borehole locations P-24 through P-30, bearing resistances presented in Table 11 are recommended for the retaining walls constructed at this site. A resistance factor of 0.55 is used to determine the factored bearing resistance for LRFD strength limit state evaluation. We have reported bearing resistances for two options, over-excavation and replacement and using existing soils. For the over-excavation and replacement option, a minimum of 18 inches of soil must be replaced with recompacted existing soil or CDOT Class 1 Structural Backfill. Replaced soil must be compacted to at least 95 percent of the maximum dry density per AASHTO T180 and at a moisture content of plus/minus 2% of optimum.

Table 11 – Preliminary Bearing Resistance Recommendations for Shallow Foundation

Bearing Material	Strength Limit State (LRFD)		Service Limit State (LRFD)
	Ultimate (Nominal) Resistance (ksf)	Factored Resistance (ksf)	Service Bearing Resistance (ksf)
Over-Ex and Replaced CDOT Class 1 Structural Fill	13.1	5.9	3.0
Existing sandy CLAY and clayey SAND Soils	5.5	2.5	1.5

Service limit state, service bearing resistance was correlated to estimated total settlement of less than 1-inch and differential settlement of less than a half-inch across both wall foundations. A minimum 36-inch depth of embedment below the final ground surface elevation for frost considerations is recommended. The service bearing resistance must not be reduced for overburden soils, but the weight of the footing must be considered for bearing capacity analysis. Service bearing resistance may not be increased for short term loading. RockSol recommends disregarding passive pressure resistance in foundation design.

Lateral Earth Pressures

Unrestrained retaining walls can be expected to deflect sufficiently to mobilize the full active earth pressure condition. Estimated ultimate (unfactored) earth pressure coefficients for vertical wall facing with Class 1 and Class 2 Structure Backfill material are presented in Table 12.

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Table 12 – Preliminary Lateral Earth Pressure Parameters

Soil Type	Total Unit Weight (γ) pcf	Effective Friction Angle, ϕ′ (degrees)	Undrained Shear Strength (psf)	Lateral Earth Pressure Coefficients (Note 1)		
				Active (k_a)	At-Rest (k_o)	Passive (k_p) (Note 2)
CDOT Class 1 Structure Backfill (CDOT Section 703.08)	125	34	0	0.28	0.44	3.54
(Fill and Native) SAND, silty to clayey with gravel	125	30	0	0.33	0.50	3.00
(Fill and Native) CLAY, sandy	125	22	300	0.46	0.63	2.20

Note 1: For horizontal backslope.
Note 2: Full value, no reduction applied

Lateral earth pressures imposed on cantilever retaining wall systems will be affected by the subgrade soils and groundwater conditions. Lateral earth pressures will also be influenced by the width of the backfill zone adjacent to the walls. For narrow backfill zones, lateral earth pressures will be influenced by the existing, in-place soils. For relatively wide backfill zones, lateral earth pressures will be influenced by the backfill soils.

A "behind the wall" drainage system is recommended for the proposed retaining wall systems. The lateral earth pressures do not include surcharge loadings such as vehicle traffic, construction equipment or fill stockpiles at or near the top of walls. Wall backfill should be compacted with light weight, hand operated equipment. The lateral earth pressure values provided in this report assume light weight hand operated compaction equipment will be used to compact backfill behind the inside wall face.

Sliding Resistance

Foundation soils anticipated to be encountered for the retaining wall systems are sandy (lean) CLAY and silty to clayey SAND with gravel. For the evaluation of sliding, parameters are presented in Table 13.

Table 13 – Sliding Resistance Parameters

Foundation Bearing Material	Foundation Soil Parameters			
	Total Unit Weight (pcf)	Effective Friction Angle φ′, (degree's)	Tan φ	Undrained Shear Strength (ksf)
(Fill and Native) CLAY, sandy (lean)	125	22	0.40	1.0
(Fill and Native) SAND, silty to clayey with gravel	125	30	0.58	0
CDOT Class 1 Structure Backfill	130	34	0.67	0

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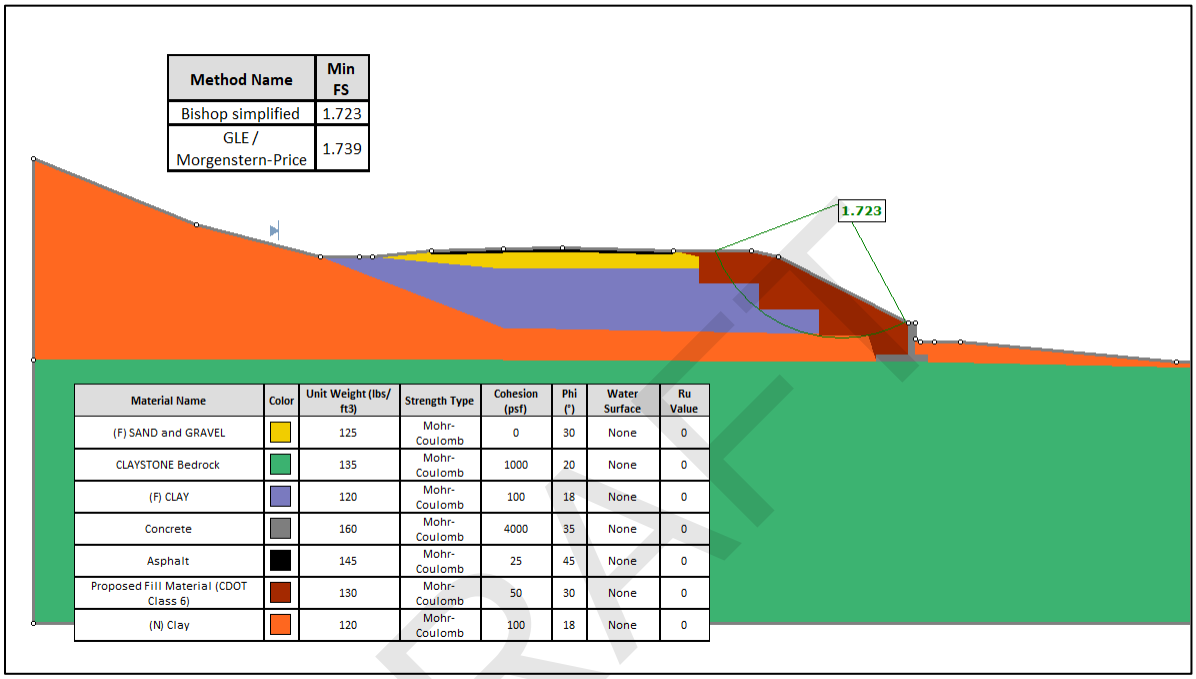
Preliminary Slope Stability

A **preliminary** global stability analysis was performed by RockSol near Borehole P-30 using the RocScience slope stability program Slide2 2018, Version 8 (SLIDE). The existing soil parameters were estimated based on material properties from our laboratory testing and blow count information obtained during our drilling and sampling operations. A factor of Safety (FOS) of 1.7 was obtained from the analysis. A **final** global stability analysis should be performed when design plans for the proposed retaining wall system is developed.



11.0 SEISMICITY

Seismic design parameters were obtained from the AASHTO LRFD Bridge Design Specifications, 9th Edition. Interpolated values for Peak Ground Acceleration Coefficient (PGA), Spectral Response Acceleration Parameter for Short Period (Ss), and Spectral Response Acceleration Parameter at 1-s Period (S1) were obtained using Figures 3.10.2.1-1, 3.10.2.1-2, and 3.10.2.1-3 of the AASHTO LRFD Bridge Design Specifications, 9th Edition for the project site.

Based on the Standard Penetration Resistance encountered for the onsite subsurface conditions, it is our opinion that the subject site meets criteria for Seismic Site Class D. Shear wave velocity testing was not performed by RockSol. If Seismic Site Class C is to be considered for final design, RockSol recommends performing shear wave velocity testing, otherwise the use of Seismic Site Class D is considered appropriate. Seismic design parameters for Seismic Site Class D are presented in this report. Seismic acceleration coefficients are presented in Table 14.

Table 14 – Seismic Acceleration Coefficients

Project Location Leyden Road Project (Latitude°/Longitude°)	Peak Ground Acceleration (PGA)	Spectral Acceleration Coefficient - S_s (0.2 sec Period)	Spectral Acceleration Coefficient - S_1 (1 sec Period)
(39.845511/ -105.199275)	0.060	0.120	0.035

The acceleration coefficients are then used to obtain Site Factors F_{pga}, F_a, and F_v based on the defined Site Class as shown in Tables 3.10.3.2-1, 3.10.3.2-2, and 3.10.3.2-3 of the AASHTO

LRFD Bridge Design Specifications, 9th Edition. A summary of the Site Factor values obtained are shown in Table 15.

Table 15 – Seismic Site Factor Values

Project Location Leyden Road Project (Latitude°/Longitude°)	F_{pga} (at zero-period on acceleration spectrum)	F_a (for short period range of acceleration spectrum)	F_v (for long period range of acceleration spectrum)
(39.845511/ -105.199275)	1.6	1.6	2.4

Values for S_1 and F_v are presented in Tables 14 and 15, shown above. The seismic design category was determined with the AASHTO LRFD Bridge Design Specifications, 9th Edition Table 3.10.6-1. Table 16 summarizes the Seismic Zone determination and horizontal response spectral Acceleration Coefficients (S_{DS} *and* S_{D1}) obtained for the proposed structure. Seismic Performance Zone determination is based on the value of the horizontal response spectral Acceleration Coefficient, S_{D1}, as determined by *Eq. 3.10.4.2-6* and S_{DS}, as determined by *Eq. 3.10.4.2-3* of the AASHTO LRFD Bridge Design Specifications, 9th Edition.

Table 16 – Seismic Performance Zone

Project Location Leyden Road Project (Latitude°/Longitude°)	Acceleration Coefficient (SD1)	Seismic Zone	Acceleration Coefficient (SDS)
(39.845511/ -105.199275)	0.084	1	0.192

Note (1): Seismic Zone 1 is assigned when $S_{D1} \leq 0.15g$

12.0 EMBANKMENT AND SITE GRADING

All embankment and site grading shall be performed in accordance with Section 300 of the City of Arvada Engineering Code of Standards and Specifications, dated October 2, 2023.

12.1 Compaction Specifications

The minimum compaction recommendations are presented in Table 17 and are based on AASHTO soil classifications. The majority of the existing site soils fall into the A-4 through A-7 grouping.

Table 17 – Compaction Specifications

AASHTO Classification (AASHTO M 145)	Relative Compaction (Minimum Percent)	Moisture Content Deviation from Optimum
A-1, A-2, and A-3	95% Min. AASHTO T180 (Modified Proctor Method)	-2% to +2%
A-4, A-5, A-6, and A-7	95% AASHTO T99 (Standard Proctor Method)	0% to +2%

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13.0 OTHER DESIGN AND CONSTRUCTION CONSIDERATIONS

Proper construction practices and adherence to project plans and specifications should be followed during site preparation, earthwork, excavations, and construction of utilities, pavements, and structures for the suitable long-term performance of the proposed improvements. Excavation support should be provided to maintain onsite safety and the stability of excavations and slopes. Excavations shall be constructed in accordance with local, state and federal regulations including OSHA guidelines. The contractor must provide a competent person to determine compliance with OSHA excavation requirements. For preliminary planning, existing fill material and native soils may be considered as OSHA Type C soils.

The actual subsurface conditions between boring locations may vary from the information obtained at specific boring locations and described in this report.

Surface drainage patterns may be altered during construction and surface drainage must be controlled to prevent water ponding and excessive moisture infiltration into the subgrade soils during and after construction.

Two areas of slope instability on the south side of Leyden Road near RockSol Borehole P-4 (see Images 12 and 13) and Borehole P-7 (see Images 14 and 15) were noted during our geotechnical field observations. At both locations, the slope soil appears to have slumped into the drainage ditch for Leyden Road. Additional movement of the slope soil into the drainage ditch is likely to occur during heavy precipitation events. Ongoing maintenance of the ditch will likely be needed or the City may consider stabilizing the slope.

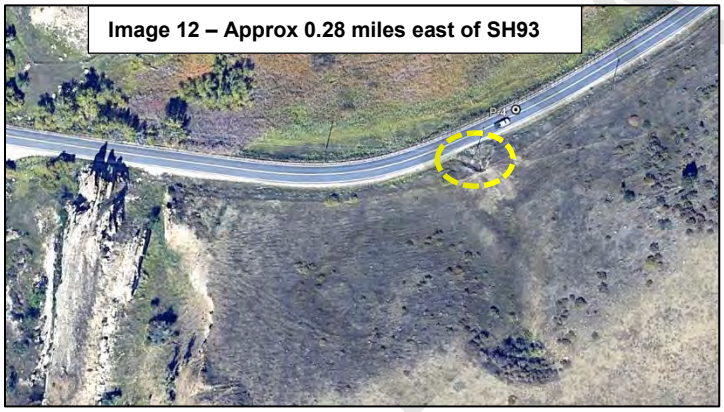


Image 12 – Approx 0.28 miles east of SH93


Image 13 – Approx 0.28 miles east of SH93



Image 14 – Approx 0.56 miles east of SH93

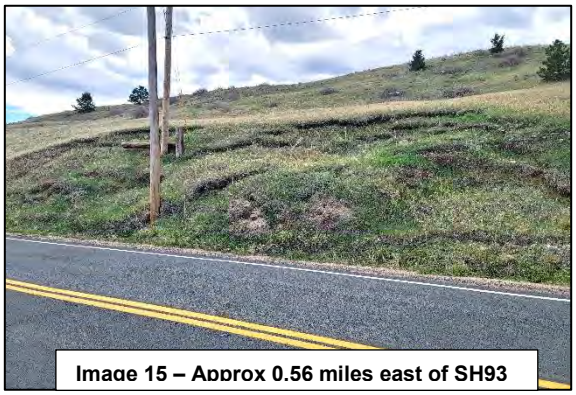


Image 15 – Approx 0.56 miles east of SH93

Also noted during at the time of our geotechnical evaluation was a partially clogged corrugated metal pipe culvert beneath Leyden Road between Boreholes P-8 and P-9, approximately 0.17 miles west of Pattridge Open Space parking lot (see Images 16 – 18).

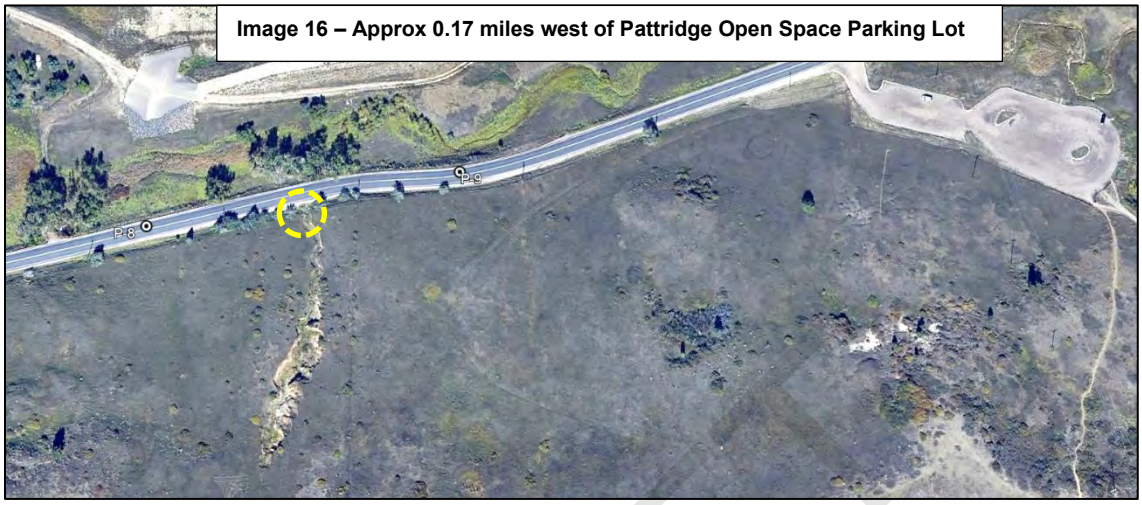


Image 16 – Approx 0.17 miles west of Pattridge Open Space Parking Lot


Image 17 – View looking north

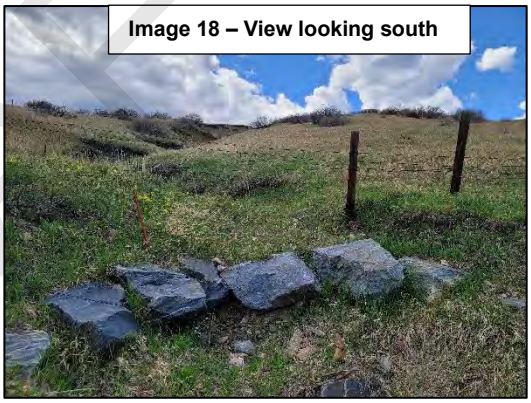


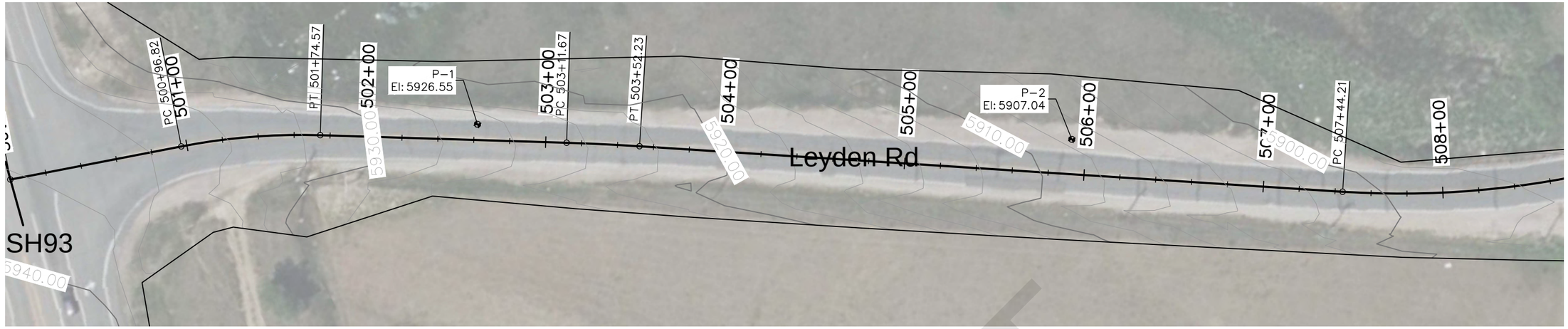
Image 18 – View looking south

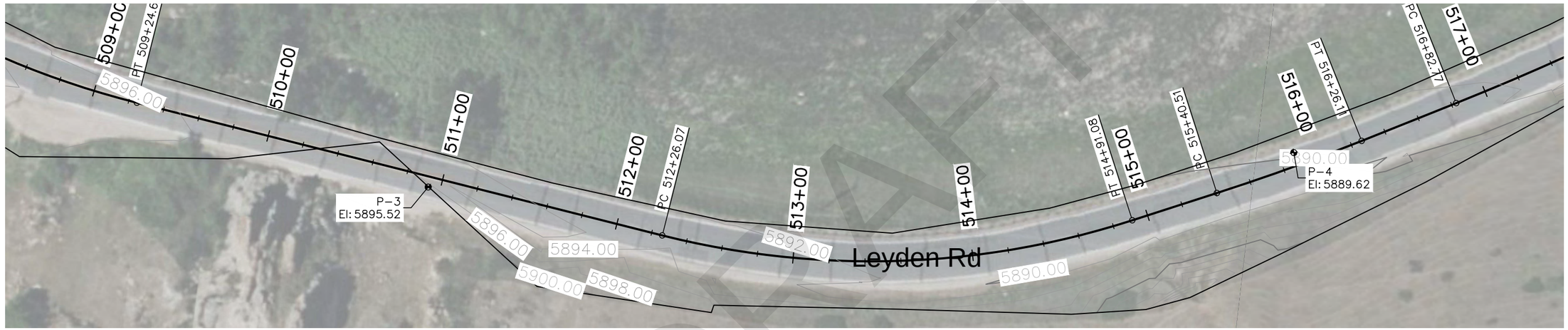
14.0 LIMITATIONS

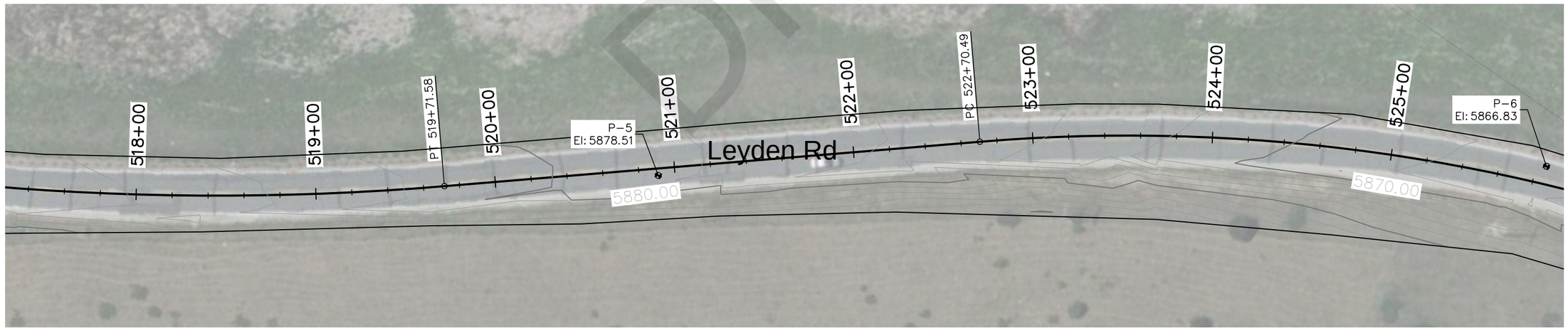
This subsurface investigation was conducted in general accordance with the scope of work to provide geotechnical support for construction of the West 82nd Avenue (Leyden Road) project.

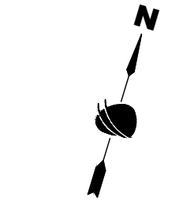
Surface and groundwater hydrology, hydraulic engineering, and environmental studies including contaminant characterization were not included in RockSol's geotechnical scope of work.

The geotechnical practices are similar to that used in Colorado with similar soil conditions and our understanding of the proposed work. This report has been prepared by RockSol for the City of Arvada exclusively for the project described in this report. The report is based on our exploratory boreholes and does not take into account variations in the subsurface conditions that may exist between boreholes. Additional investigation is required to address such variation. If during construction activities, materials or water conditions appear to be different from those described herein, RockSol should be advised at once so that a re-evaluation of the recommendations presented in this report can be made. RockSol is not responsible for liability associated with interpretation of subsurface data by others. This report shall not be reproduced without written consent from RockSol.









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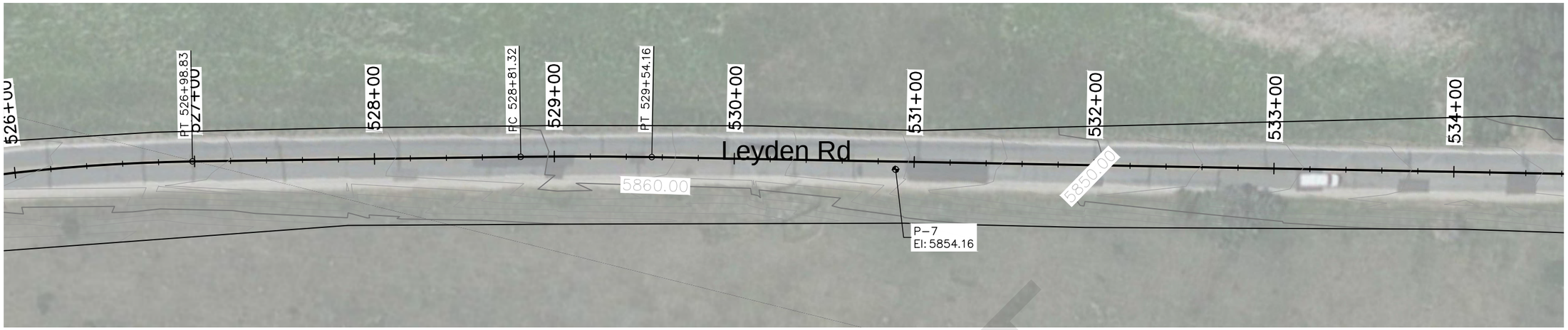

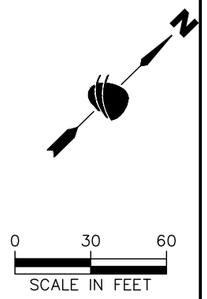



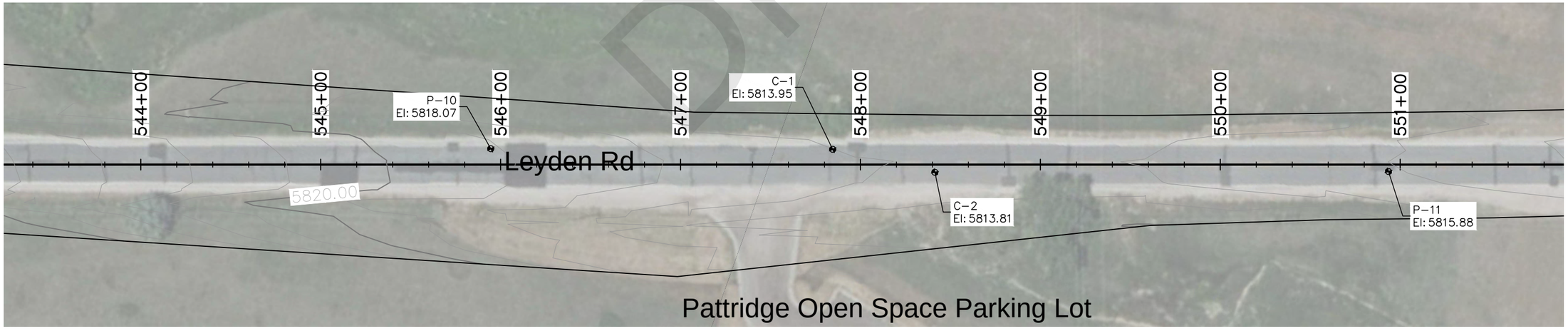

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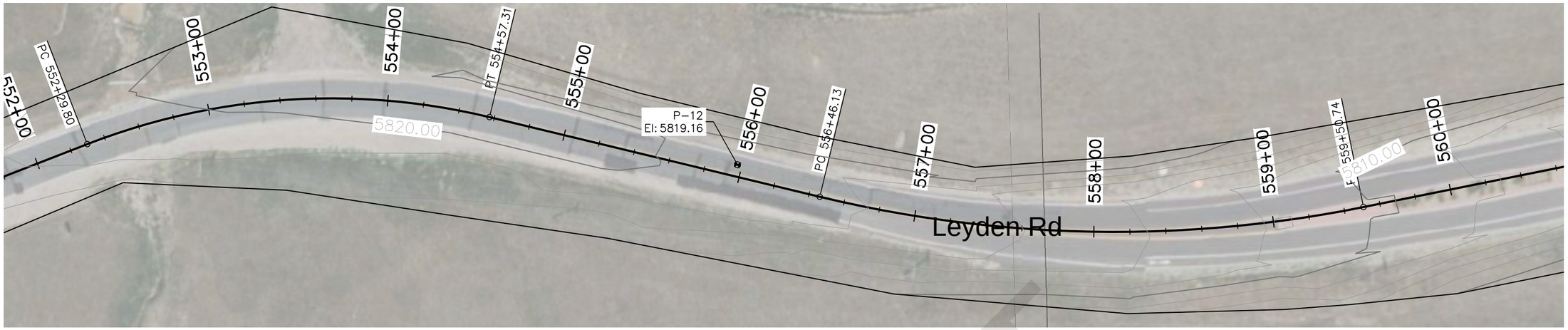

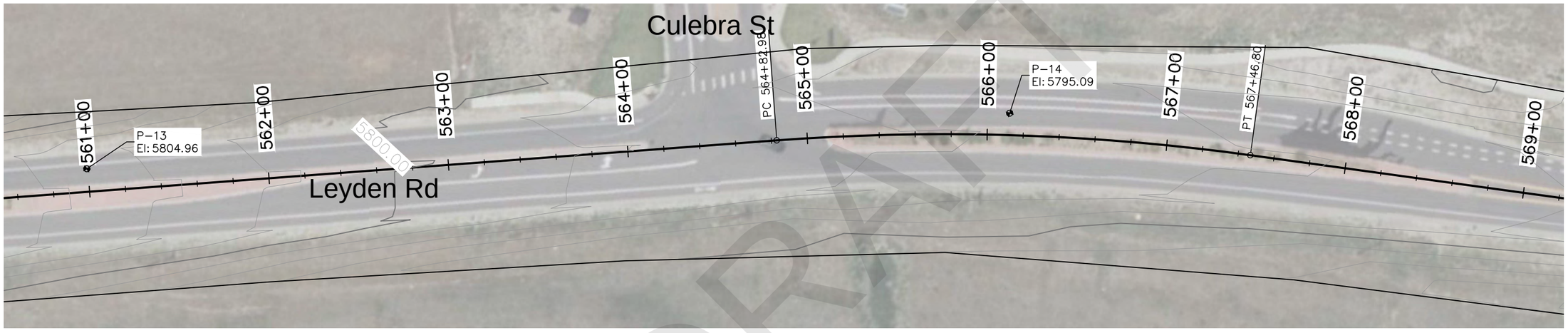

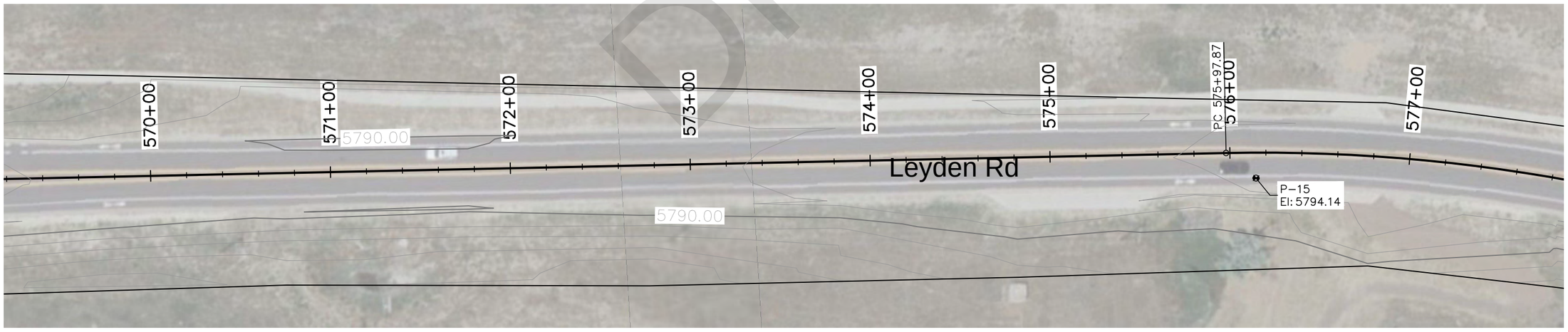

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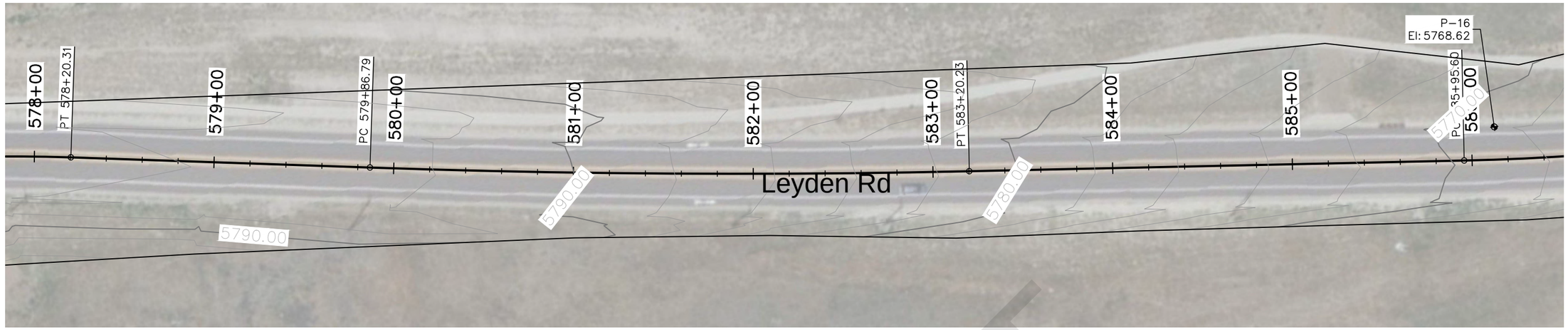

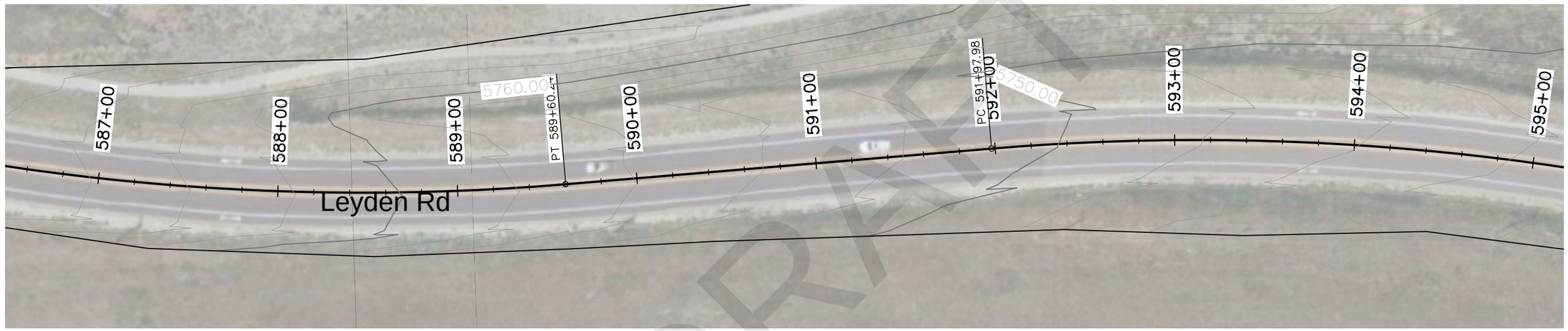

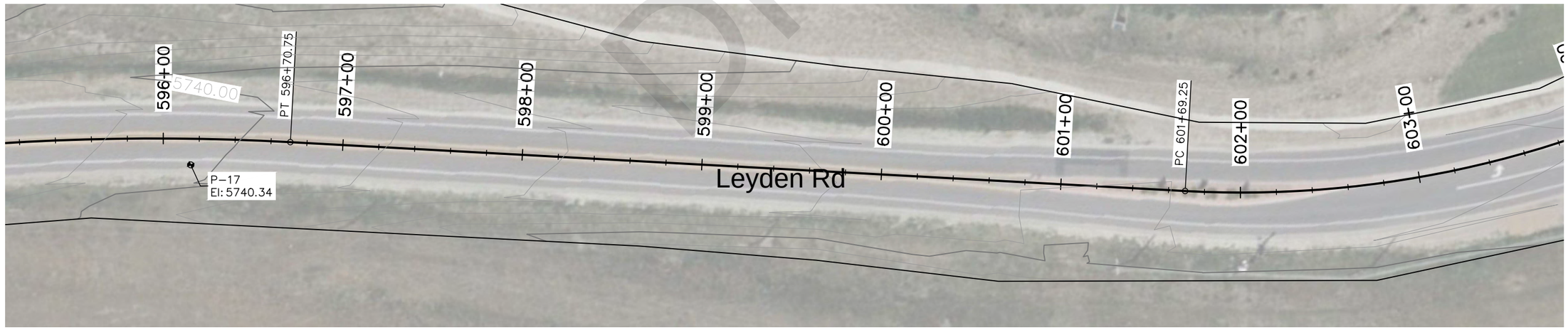

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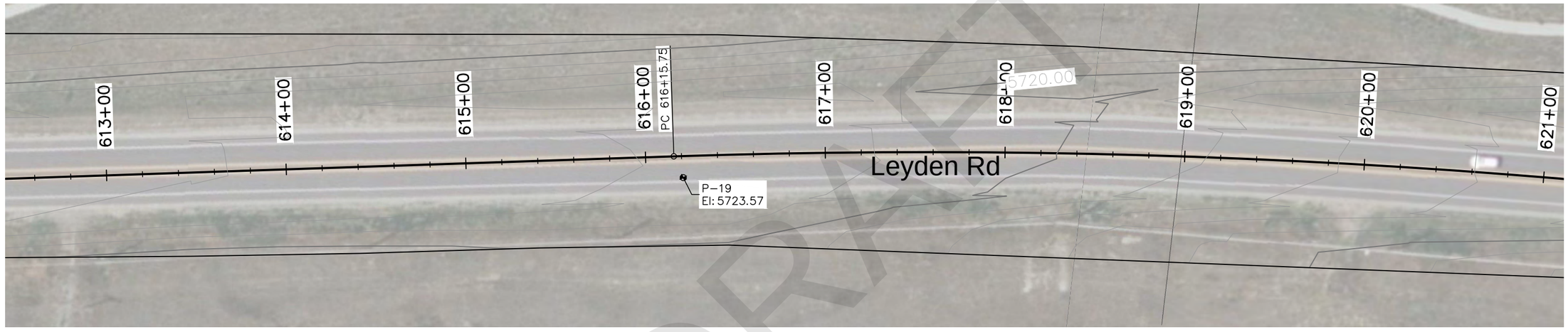

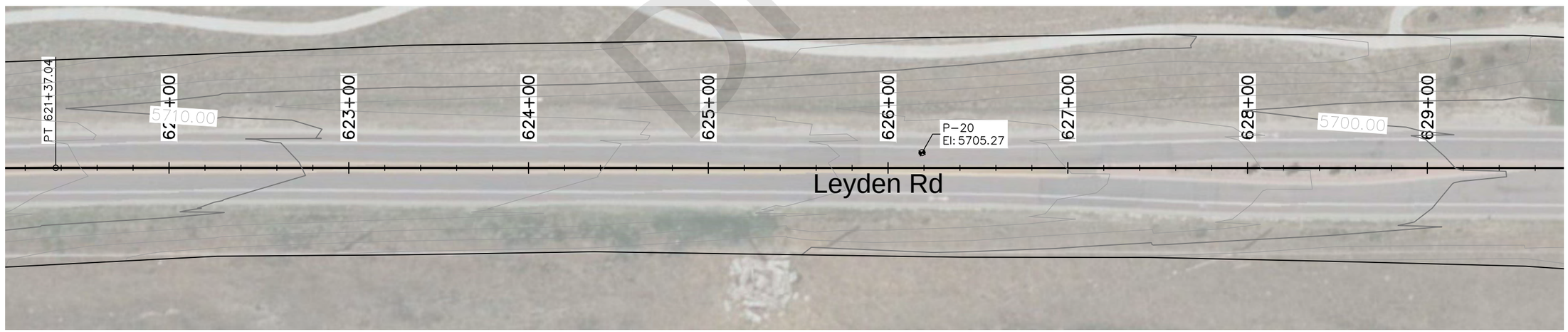

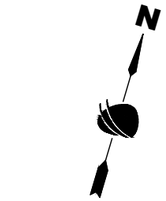

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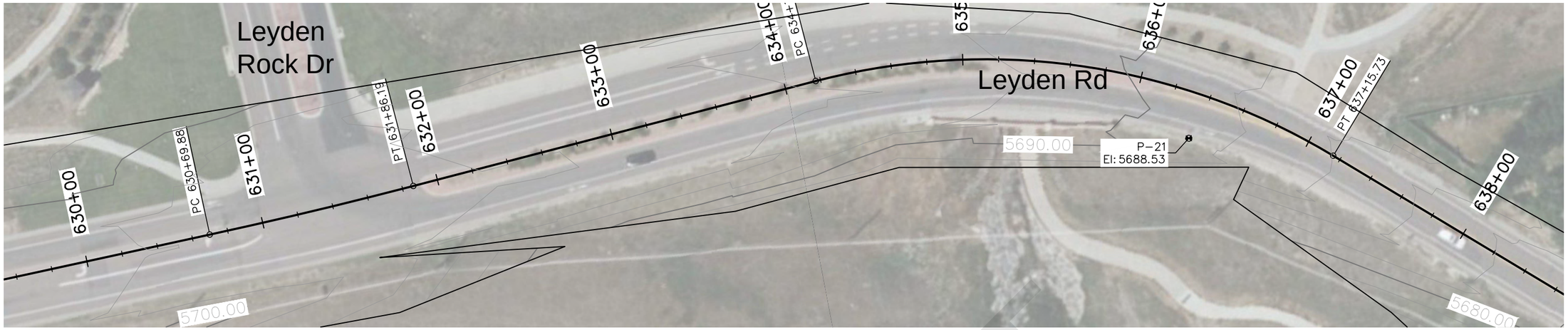

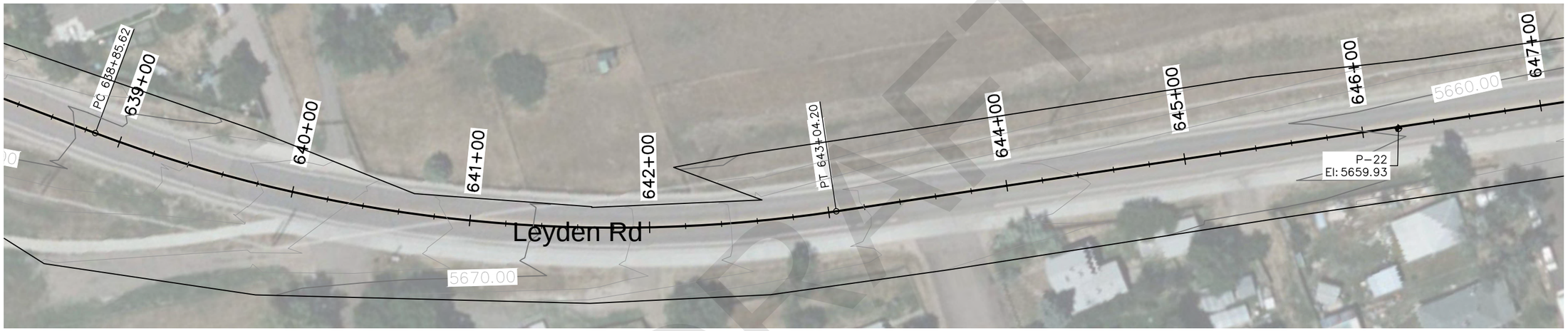



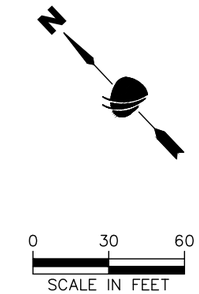

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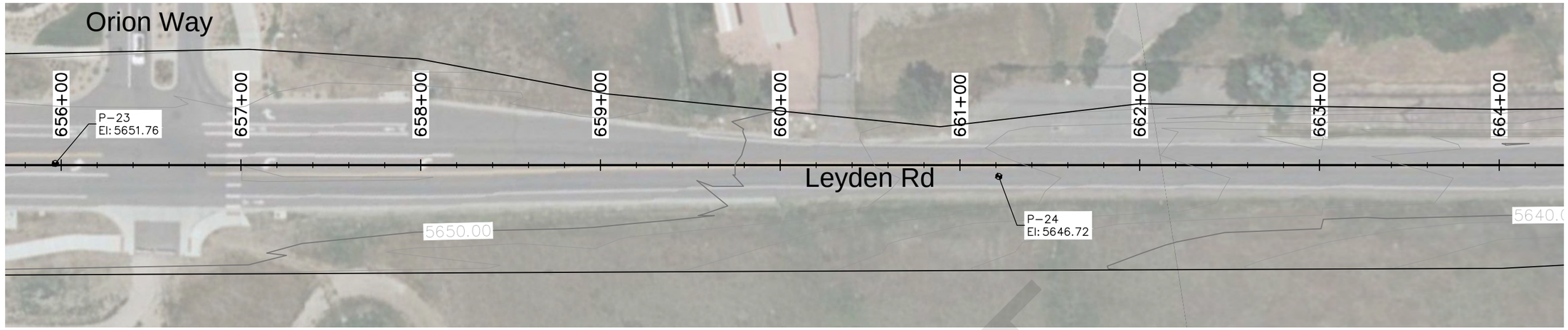

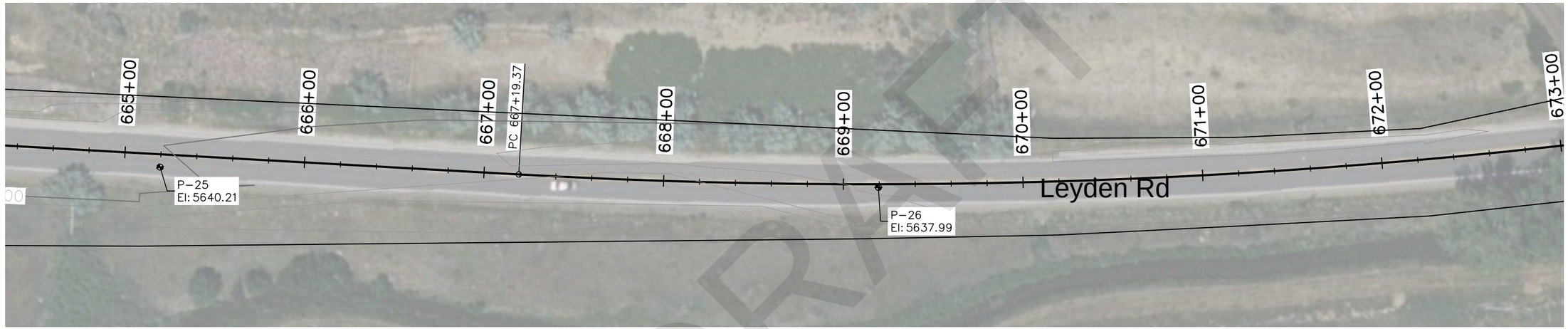



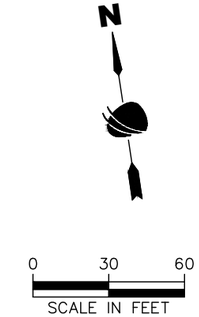

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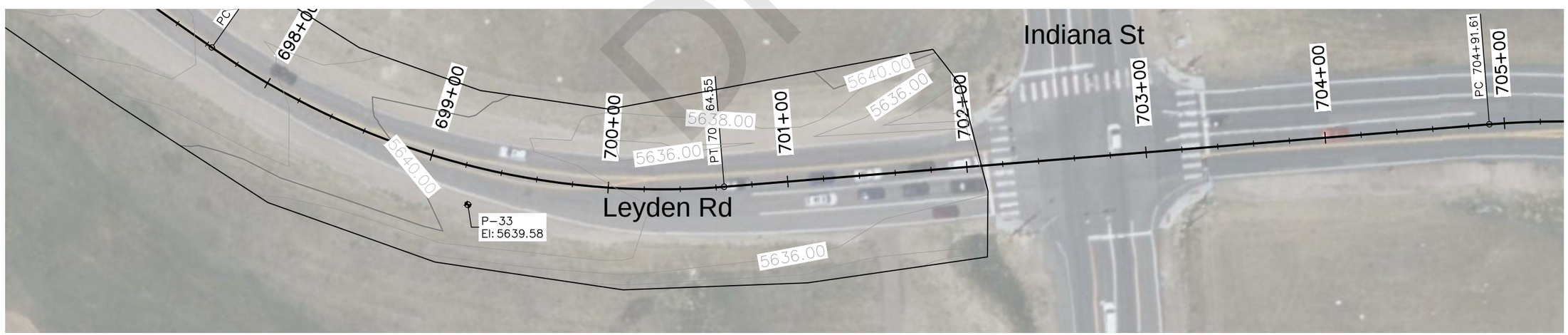

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Limited Site Investigation

Leyden Road Project

82nd Avenue Right-of-Way between State Highway 93 and Indiana Street

Arvada, Jefferson County, Colorado

May 13, 2025 | Terracon Project No. 25247529

Prepared for:

City of Arvada
Public Works Department
Traffic and Transportation
6101 Olde Wadsworth Boulevard
Arvada, Colorado 80003



Prepared by:

Terracon Consultants, Inc.
Wheat Ridge, Colorado

Terracon

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- Facilities
- Environmental
- Geotechnical
- Materials

May 13, 2025

City of Arvada
Public Works Department – Traffic and Transportation
6101 Olde Wadsworth Boulevard
Arvada, Colorado 80003

Attn: Mr. Brian Lavey
P: (720) 498-0648
E: blavey@arvada.org

RE: Limited Site Investigation
Leyden Road Project
82nd Ave. (Leyden Rd.) Right of Way between State Highway 93 and Indiana St.
Arvada, Colorado 80007
Terracon Proposal No. P25247529

Dear Mr. Lavey:

Terracon Consultants, Inc. (Terracon) has prepared the attached report for Limited Site Investigation (LSI) activities performed at the above-referenced site. The report presents data from recent field activities that included the installation of soil borings to assess the potential for impacts to the right-of-way from two offsite landfills. Terracon conducted this study in general accordance with Terracon Proposal P25247529, Revision 1, dated February 28, 2025, and your subsequent notice to proceed on March 3, 2025.

Terracon appreciates the opportunity to provide environmental services to you. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Terracon Consultants, Inc.

Andi Barendt, P.E.
Senior Environmental Engineer

Kevin Saylor, P.E.
Senior Environmental Engineer

Executive Summary

This Limited Site Investigation (LSI) was performed in general accordance with the scope of services outlined in the Terracon Consultants, Inc. (Terracon) Proposal No. P25247529 dated February 28, 2025. Terracon coordinated with RockSol and Vine for the installation and sampling of 13 soil borings. Soil samples were collected from each boring to evaluate potential volatile organic compound (VOC), semi volatile organic compound (SVOC), and Resource Conservation and Conservation Act (RCRA) metals impacts to site soil and groundwater from the nearby historical landfills.

Soil and groundwater samples were collected in accordance with the procedures outlined in Section 3. Soil samples were compared to November 2024 Residential and Commercial United States Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) and Risk-Based Site Screening Levels (SSLs) for protection of groundwater. Surface water samples were compared to the standards outlined in the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) Regulation No. 31 The Basic Standards & Methodologies for Surface Water, Regulation No. 38, Classifications and Numeric Standards for South Platte River Basin, Laramie Basin, Republic River Basin, Smoke Hill River Basin, and Regulation No. 41, The Basic Standards for Ground Water.

A summary of the report findings, conclusions, and recommendations is provided below. It should be recognized that the LSI report must be read in its entirety for a comprehensive understanding of the items contained herein.

Findings and Conclusions

In conjunction with RockSol's geotechnical investigation, Terracon collected 13 soil samples from 13 soil borings (P3 through P9, P25, P29 through P32, and C1) at the site on March 20, March 21, March 26, and April 10, 2025, for laboratory analysis. One surface water sample was also collected from Leyden Creek on March 20, 2025, for laboratory analysis. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Resource Conservation Act (RCRA) Metals to evaluate potential impacts from the abandoned onsite tanks and offsite landfills.

The reported concentrations of arsenic in soil were in excess of the EPA Residential and Commercial RSLs and the Risk-Based RSL; however, reported concentrations were below the CDPHE background concentration of 11 milligrams per kilogram (mg/kg) and are assumed to be naturally occurring. The metals barium, cadmium, mercury, and selenium were reported at concentrations in excess of their respective Risk-Based SSLs. The VOCs benzene, chloroform, ethylbenzene, and naphthalene were reported in excess of their respective Risk-Based SSLs. The SVOCs benzo(a)anthracene and benzo(a)pyrene were reported in excess of their respective Risk-Based SSLs.

The reported concentration of selenium in the surface water sample collected for analysis was in excess the chronic TVS. VOCs and SVOCs were not reported above the laboratory reporting limits in the sample.

Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, Terracon recommends that a materials management plan be implemented for the future right of way improvements at the site.

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LIMITED SITE INVESTIGATION

Leyden Road Project

82nd Avenue Right-of-Way between State Highway 93 and Indiana Street

Arvada, Jefferson County, Colorado

Terracon Project No. 25247529

May 13, 2025

1.0 Site Description

The site is located along the 82nd Avenue (Leyden Road) right of way between State Highway 93 and Indiana Street in Arvada, Jefferson County, Colorado (site). It is our understanding that the City of Arvada (City) will be widening sections of Leyden Road that include bike lanes, shoulders, curbs/gutters, and sidewalks. This LSI was requested to evaluate worker exposure to soil and groundwater conditions during the project. Currently operating Republic Services Foothills Landfill north of the western portion of the site and the historical Leyden Landfill north of the eastern portion of the site were known concerns in the area at the time the proposal was prepared.

A Topographic Map and diagrams showing approximate boring locations with the site location are included as Exhibits 1, 2, and 3.

2.0 Scope of Services

The objective of the proposed LSI is to assess soil and groundwater (or surface water) that may be present at the site from the adjoining landfills. These concerns were identified based on preliminary research of the area. Assumed contaminants of concern (COCs) include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Resource Conservation and Recovery Act (RCRA) metals in soil and groundwater. This LSI is not intended to define the extent of potential contamination, but to assess if COCs are present in the media in the areas of assessment, primarily within the upper 5 feet of soil that will be disturbed during the improvement project. The assumed COCs are common to landfills.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information

used in the preparation of the report. These LSI services were performed in accordance with the scope of work agreed upon with you, our client, as reflected in our proposal, and were not restricted by ASTM E1903-19.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

The LSI report was prepared for the exclusive use and reliance of the City of Arvada Upon request, Terracon may grant reliance to the client and designated parties. Any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the City of Arvada and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Reliance by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in Terracon's Agreement, and sections of this report incorporated therein. The limitation of liability defined in the executed contractual agreement is the aggregate limit of Terracon's liability to the client and all relying parties.

3.0 Field Investigation

3.1 Health and Safety Plan Preparation

Terracon conducted the fieldwork under a site-specific health and safety plan developed for the project. Work was performed using Occupational Safety and Health Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, safety vests, protective gloves, and protective boots.

3.2 Utility Clearance

Rocksol and/or their subcontracted drilling firm, Vine, were responsible for underground utility locating, traffic control, and permitting.

3.3 Soil Borings

Between March 20 and April 10, 2025, Terracon was onsite with RockSol and their subcontracted driller, Vine, for the advancement of 13 borings at the site, designated as follows:

- P-3 through P-9
- C-1
- P-25
- P-29 through P-32

Borings were advanced using a hollow stem auger rig to depths ranging from 10 to 25 feet below ground surface (bgs). Overall, boring locations were selected to assess the geotechnical suitability of site soils. The subset of borings sampled for environmental purposes were selected with input from the City to evaluate the potential impact to the site from the active Republic Services Foothills Landfill, the closed Leyden Landfill, and petroleum storage tanks located at the Xcel Energy facility at 15995 West 82nd Avenue, which were identified through the Phase I Environmental Site Assessment, prepared concurrently with this LSI.

Soil samples were collected on a continuous basis on 5-foot vertical intervals during the advancement of the soil borings. The analytical samples were generally collected in the 1 to 5 feet bgs interval. The soils were evaluated in the field for type, color, grain size, and other soil characteristics, including indications of potential environmental impact (e.g., staining or odor). The soil boring logs representing the observed and interpolated stratification boundaries of the site soils are included in Appendix B.

Terracon field screened soil samples for organic vapors using a photoionization detector (PID). This device provides a direct reading in parts per million (ppm) isobutylene equivalents. Upon removal of the sampler from the borehole, Terracon put a portion of each sample in a sealable plastic bag. After a stabilization period, Terracon screened the headspace above the soil using the PID equipped with a 10.6 electron-volt (eV) ultraviolet lamp source. Terracon calibrated the PID in accordance with the manufacturer's recommendations before the field activities. The soil boring logs included in Appendix B also present the field screening results for each soil boring.

Sampling equipment was decontaminated prior to project commencement, and before beginning work at each sampling location. The sampling equipment was decontaminated with an Alconox detergent rinse and potable water.

3.4 Temporary Monitoring Well Installation

Temporary monitoring wells were not installed due to groundwater not being encountered in borings advanced to 20 feet bgs.

3.5 Soil and Surface Water Sampling

In general, soil samples were collected for laboratory analysis from the soil interval between 0 and 5 feet bgs or based on PID screening. Sampling personnel wore dedicated nitrile gloves to minimize the potential for sample cross-contamination.

Soil samples collected for laboratory analysis were placed into labeled laboratory-provided jars. The samples were placed on ice for storage and transport to the laboratory accompanied by a completed chain of custody. The samples were analyzed by Pace Analytical of Mt. Juliet, Tennessee.

As groundwater was not encountered in deep borings, groundwater samples were not collected. A surface water sample was collected from Leyden Creek on March 20, 2025. Surface water samples collected for laboratory analysis were placed into labeled laboratory-provided jars. Surface water samples were placed on ice for storage and transported to Pace Analytical accompanied by a completed chain of custody for laboratory analysis.

The samples were analyzed as follows:

Analysis	Sample Media	Number of Samples	USEPA/Laboratory Method
VOCs	Soil/Surface Water	12/1	SW-846, 8260B
SVOCs	Soil/Surface Water	12/1	SW-846, 8270C
RCRA Metals	Soil/Surface Water	12/1*	SW-846, 6010D, 7470A, 7471B

*Laboratory-filtered and reported on a dissolved basis.

4.0 Results of the Field Investigation

4.1 Geology

Based on observations during drilling, the site is generally overlain by concrete and asphalt at thicknesses ranging from 6 inches to 7 inches. In borings C-1, P-4, P-5, P-7, P-8, P-9, P-31, and P-32, brown clays with varying amounts of sand and gravel were encountered to depths of between 10 feet bgs at shallow boring terminations and 15 feet bgs in boring C-1. Following clay in boring C-1, weathered sandstone was encountered to 18 feet bgs and underlain by claystone to boring termination at 24 feet bgs. In borings P-25 and P-30, silty sand was encountered to between 3.5 and 5 feet bgs, followed by clay with varying amounts of sand and gravel to depths between 7.5 and 14 feet bgs, underlain by weathered claystone to boring termination at 20 bgs. In boring P-29, gravelly silt with sand was encountered from the surface to 3.5 feet bgs, followed by clay to 17 feet bgs, and underlain by claystone/sandstone bedrock to boring termination at 20 feet bgs. In

borings P-3 and P-6, sandy gravel was encountered up to 2 feet bgs, followed by brown clay to boring termination at 10 feet bgs.

Groundwater was not encountered in the borings advanced at the site.

4.2 Field Screening

PID field screening indicated areas with VOCs above the field detection limit of 1 ppm isobutylene equivalent in borings P-25, P-29, and P-30. Soil staining and odors were not noted in the soil samples collected from the site. The field screening results are provided on the soil boring logs in Appendix B. Where screening results were in excess of the field detection limit, samples were collected from the interval in the boring with the highest field reading.

5.0 Summary of Analytical Results

5.1 Summary of Soil Analytical Results

Soil analytical results were compared to the November 2024 EPA Residential and Industrial Regional Screening Levels (RSLs), and the EPA Risk-Based Soil Screening Level (SSLs). The EPA RSLs are the default screening levels accepted by the Colorado Department of Public Health and Environment (CDPHE) that trigger the need for additional response actions for soil contamination.

CDPHE began using the EPA Risk-Based SSLs in October 2020 to evaluate the potential migration of contaminants leaching from soil to groundwater. The Risk-Based SSLs are applied to sites where groundwater is used as a drinking water source. It is Terracon's understanding that the site will be serviced by a municipal water supply, and therefore the SSLs do not apply to the site. Per the EPA Soil Screening Guidance: User's Guide, Screening Guidance Publication 9355.4-23, July 1996: SSLs are not national cleanup standards. SSLs alone do not trigger the need for response actions or define "unacceptable" levels of contaminants in soil.

A summary of the soil analytical results is provided in Table 1 of Appendix A and the laboratory report is provided in Appendix C. The following is a narrative of the testing results:

- Arsenic was the only constituent reported in soil at concentrations above US EPA RSLs and the Risk-Based SSL. Arsenic was reported at concentrations ranging from 2.04 milligrams per kilogram (mg/kg) to 6.90 mg/kg, which exceed the Risk Based SSL of 0.0015 mg/kg, the Residential RSL of 0.68 mg/kg, and, in 7 of 13 samples, the Industrial RSL of 3.0 mg/kg. The CDPHE recognizes that arsenic can be naturally occurring and has authored the document titled: Risk Management Guidance for Evaluating Arsenic Concentrations in Soil, published in 2011, revised in 2014

(CDPHE, 2014). This document states that arsenic has been demonstrated to be naturally occurring in Colorado soils at concentrations significantly higher than the national average. The CDPHE developed an average background concentration of arsenic found in certain native Colorado soils averaging 11 mg/kg with measured concentrations as low as 3 mg/kg and as high as 19 mg/kg. The reported arsenic concentrations are below the background average concentration of 11 mg/kg and are considered naturally occurring.

Barium was reported in excess of the Risk-Based SSL of 160 mg/kg in samples P-7 (169 mg/kg) and P-9 (297 mg/kg). Cadmium was reported in samples P-3, P-4, P-7, P-8, P-9, P-25, P-29, P-30, and P-32 at concentrations ranging from 0.145 mg/kg to 0.264 mg/kg, which exceed the Risk-Based SSL of 0.14 mg/kg. Mercury was reported in excess of the Risk-Based SSL of 0.033 mg/kg in sample P-5 (0.0332 mg/kg). Selenium was reported in excess of the Risk-Based SSL of 0.52 mg/kg in samples P-5 (1.5 mg/kg), P-6 (1.62 mg/kg), and P-7 (2.86 mg/kg).

Chromium and silver were reported at concentrations below their respective screening levels in multiple samples.

In general, the reported metals concentrations are typical of local background concentrations.

- Benzene was reported in excess of the Risk-Based SSL of 0.00023 mg/kg in samples P-30 (0.00162 mg/kg) and P-31 (0.0495 mg/kg). Chloroform was reported in excess of the Risk-Based SSL of 0.000061 mg/kg in samples P-5, P-8, P-9, and P-30 at concentrations ranging from 0.00148 mg/kg to 0.00194 mg/kg. Ethylbenzene was reported in excess of the Risk-Based SSL of 0.0017 mg/kg in sample P-31 (0.0278 mg/kg). Naphthalene was reported in excess of the Risk-Based SSL of 0.00038 mg/kg in sample P-31 (0.0400 mg/kg).

  Acetone, isopropylbenzene, p-isopropyltoluene, 2-butanone, n-propylbenzene, styrene, toluene, 1,2,4-trimethylbenzene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes were reported at concentrations below their respective screening levels in multiple samples.

  Multiple laboratory reporting limits for VOCs are above the Risk-Based SSL due to laboratory methods and dilution prior to analysis.

- Benzo(a)anthracene was reported in excess of the Risk-Based SSL of 0.011 mg/kg in sample P-31 (0.105 mg/kg). Benzo(a)pyrene was reported in excess of the Risk-Based SSL of 0.029 mg/kg in sample P-31 (0.148 mg/kg).

  Benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, phenanthrene, and pyrene were reported at concentrations below their respective

screening levels in various samples.

Multiple laboratory reporting limits for SVOCs are above the Risk-Based SSL due to laboratory methods and dilution prior to analysis.

As groundwater was not encountered during exploration activities, Terracon is not able to provide comparative analysis of SSLs and groundwater concentrations and cannot discount the possibility that impacts to groundwater from impacts in excess of the Risk-Based SSL.

5.2 Summary of Surface Analytical Results

Surface water analytical results were compared to the following standards:

- CDPHE Water Quality Control Division (WQCD) Regulation No. 31 (5 CCR 1002-31), The Basic Standards & Methodologies for Surface Water
  - Regulation No. 31 presents the basic standards for groundwater and the equations used to calculate the Table Value Standards (TVS) for chronic and acute fish exposure scenarios. The TVS are calculated based on the hardness of the water in the stream. For calculating the TVS relevant to this project, Terracon assumed a hardness of 200 milligrams per liter (mg/L)
- CDPHE WQCD Regulation No. 38 (5 CCR 1002-38), Classifications and Numeric Standards for South Platte River Basin, Laramie Basin, Republic River Basin, Smoke Hill River Basin
  - Site is located along stream segment COSPCL18B Mainstem of Leyden Creek and Van Bibber Creek from their source to their confluence with Ralston Creek.
- CDPHE WQCD Regulation No. 41 (5 CCR 1002-41), The Basic Standards for Ground Water (CGWQS)

A summary of the analytical results is provided in Table 2 in Appendix A. The laboratory report is provided in Appendix C and the following is a summary of the analytical results:

- Selenium was reported at a concentration of 7.59 micrograms per liter (µg/L) in the sample collected, which is in excess of its chronic TVS of 4.6 µg/L
- Barium and lead were reported at concentrations below their respective screening levels
- VOCs and SVOCs were not reported in the sample collected at the site

6.0 Conclusions

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following.

- Thirteen soil borings (P-3 through P-9, C-1, P-25, and P-29 through P-32) were advanced to depths of either 10 feet bgs or 20 feet bgs on various dates between March 20 and April 10, 2025, to characterize the subsurface lithology and to collect soil samples for laboratory analysis.
- Groundwater was not encountered in borings advanced to 20 feet bgs at the site.
- A surface water sample was collected on March 20, 2025, from Leyden Creek
- In general, the site lithology consisted of clays, underlain by claystone and sandstone. Bedrock was encountered at depths between 6 feet bgs and boring terminations at 20 feet bgs
- As summarized in Section 5.1, laboratory analysis of the soil samples collected during this investigation indicated concentrations of various RCRA metals, VOCs, and SVOCs above their respective Risk-Based SSLs; however, below their respective Residential and Industrial RSLs. The exception to this is arsenic, which was encountered in multiple borings at concentrations in excess of their respective Residential and Industrial RSLs, but below the accepted CDPHE background concentration. As the reported concentrations are below the accepted CDPHE background concentration, the arsenic is assumed to be naturally occurring.
- As summarized in Section 5.2, reported RCRA metals, VOCs, and SVOCs were not present at concentrations in excess of their respective surface water standards CGWQS, with the exception of selenium, which was reported in excess of its chronic TVS.

7.0 Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, Terracon recommends that a materials management plan be implemented for the site.

8.0 References

5 CCR 1002-31, CDPHE WQCD Regulation No. 31, The Basic Standards & Methodologies for Surface Water

5 CCR 1002-38, CDPHE WQCD Regulation No. 38, Classifications and Numeric Standards for South Platte River Basin, Laramie Basin, Republic River Basin, Smoke Hill River Basin

5 CCR 1002-41, CDPHE WQCD Regulation No. 41, The Basic Standards for Ground Water

APPENDIX A

Exhibit 1 – Topographic Map

Exhibit 2 – Republic Services Landfill Borings

Exhibit 3 – Leyden Landfill Borings

Table 1 – Summary of Soil Analytical Results

Table 2 – Summary of Surface Water Analytical Results

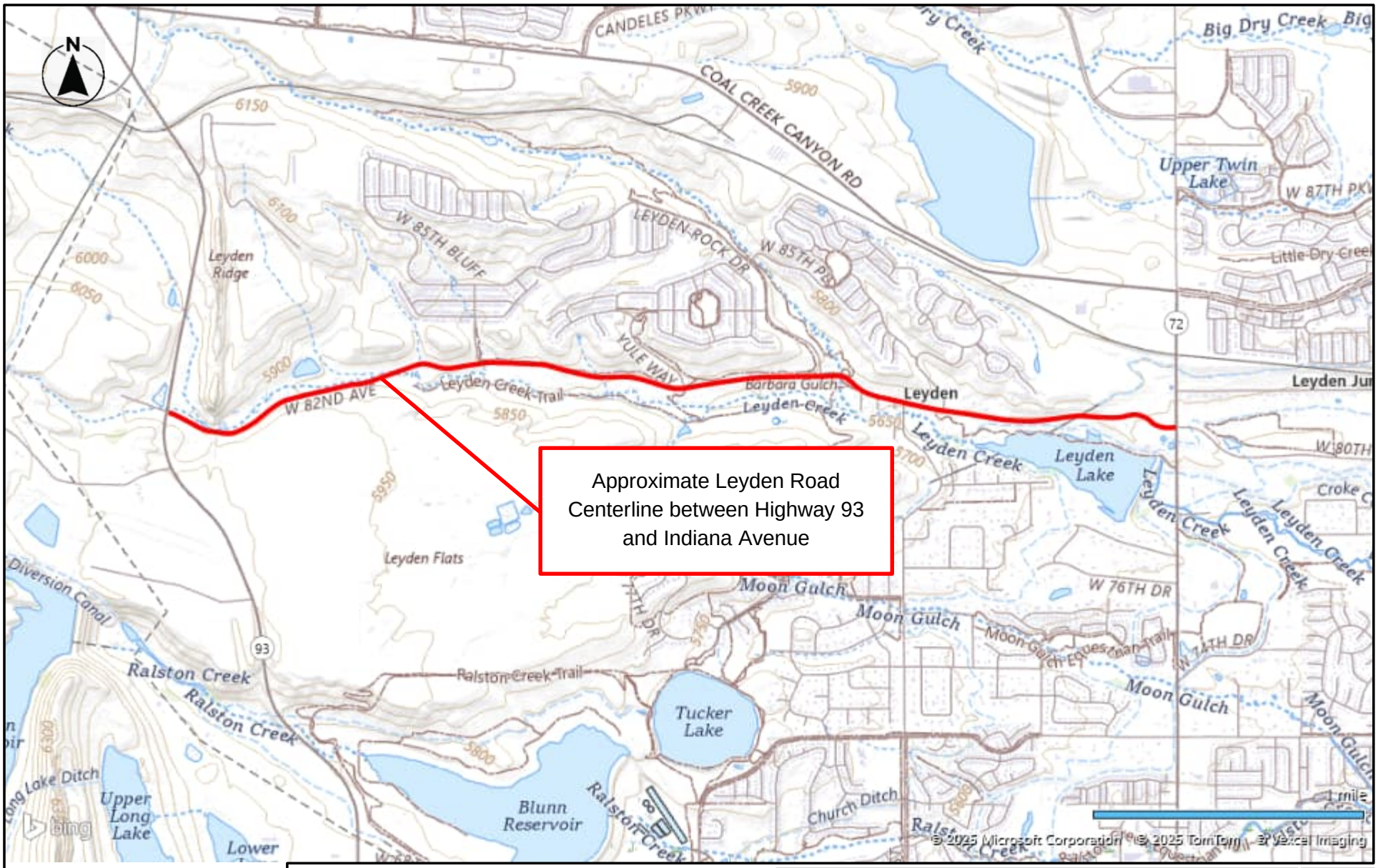


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project:	25247529
Scale:	AS SHOWN
Client:	City of Arvada CO
Date:	05/2025

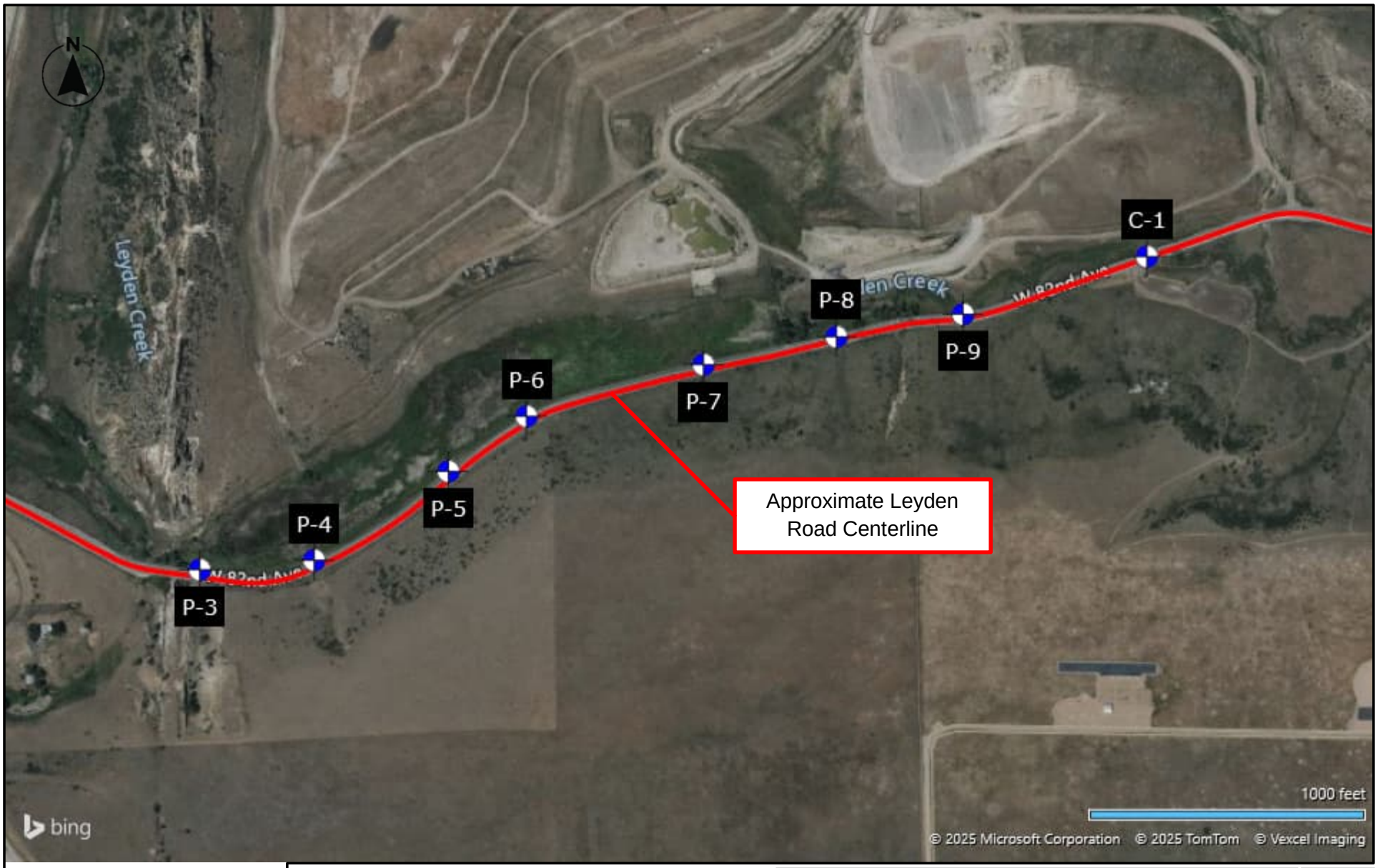
Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729

TOPOGRAPHIC MAP

Leyden Road Project LSI

82nd Avenue
Arvada, CO

Exhibit 1



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Project No.	25247529
Scale:	AS SHOWN
Client:	City of Arvada CO
Date:	05/2025

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729

REPUBLIC SERVICES LANDFILL BORINGS

Leyden Road Project LSI

82nd Avenue
Arvada, CO

Exhibit

2



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project No.	25247529
Scale:	AS SHOWN
Client:	City of Arvada CO
Date:	05/2025

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729

LEYDEN LANDFILL BORINGS

Leyden Road Project LSI

82nd Avenue
Arvada, CO

Exhibit

3

Table 1
Summary of Soil Analytical Results
Leyden Road Project
Leyden Road, Arvada, Colorado
Terracon Project No. 25247529

Sample ID and Depth				P-3 0-5	P-4 0-5	P-5 0-5	P-6 0-5	P-7 0-5	P-8 0-5	P-9 0-5	C-1 0-5	P-25 1-2	P-29 0-5	P-30 0-5	P-31 0-5	P-32 0-5
Collection Date				3/20/25	3/20/25	3/20/25	3/20/25	3/20/25	3/20/25	3/20/25	3/21/25	3/26/25	3/26/25	4/10/25	4/10/25	4/10/25
Parameter	**Residential RSL**	**Industrial RSL**	**Risk-Based SSL**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RCRA Metals (6020B / 7471)																
Arsenic[1]	**0.68 - 11**	**3.0 - 11**	**0.0015**	**2.04 J**	**5.28**	**6.90**	**4.04**	**5.75**	**2.44**	**5.46**	**2.52**	<2.08	**3.92**	**2.50**	<2.25	**4.71**
Barium	**15,000**	**220,000**	**160**	**88.2**	**135**	**118**	**101**	**169**	**95.4**	**297**	**125**	**54.3**	**84.4**	**68.5**	**47.9**	**147**
Cadmium	**71**	**100**	**0.14**	**0.145 J**	**0.221 J**	**0.13 J**	<0.580	**0.208 J**	**0.211 J**	**0.207 J**	**0.109 J**	**0.172 J**	**0.264 J**	**0.219 J**	<0.563	**0.211 J**
Chromium	NE	NE	NE	**15.2**	**30.9**	**28.7**	**19.1**	**25.2**	**22.8**	**21.3**	**32.6**	**10.4**	**20.4**	**68.0**	**22.3**	**30.4**
Lead	**200**	**800**	NE	**12.2**	**18.1**	**16.4**	**12.7**	**17.7**	**16.4**	**20.1**	**12.2**	**11.1**	**16.2**	**17.4**	**4.54**	**18.3**
Mercury	**7**	**30**	**0.033**	<0.0459	<0.0473	**0.0332 J**	**0.0255 J**	<0.0481	<0.0441	<0.0488	<0.0428	<0.0416	<0.0465	<0.0493	<0.0451	<0.0466
Selenium	**390**	**5,800**	**0.52**	<2.30	<2.37	**1.5 J**	**1.62 J**	**2.86**	<2.21	<2.44	<2.14	<2.08	<2.33	<2.46	<2.25	<2.33
Silver	**390**	**5,800**	**0.80**	**0.314 J**	**0.489 J**	**0.536 J**	**0.583 J**	**0.461 J**	**0.534 J**	**0.606 J**	**0.448 J**	<1.04	**0.499 J**	**0.218 J**	<1.13	<1.17
VOC (8260B)																
Acetone	**70,000**	**1,100,000**	**0.37**	<0.0746 C3 J3	<0.0685 C3 J3	<0.0704 C3 J3	<0.0660 C3 J3	<0.0715 C3 J3	<0.0603 C3 J3	<0.0719 C3 J3	<0.0572	<1.09	<0.0669	**0.068 J**	<0.0666	<0.0673
Benzene	**1.2**	**5.1**	**0.00023**	<0.00149	<0.00137	<0.00141	<0.00132	<0.00143	<0.00121	<0.00144	<0.00114	<0.0217	<0.00134	**0.00162**	**0.0459**	<0.00135
Chloroform	**0.32**	**1.4**	**0.000061**	<0.00373	<0.00343	**0.00194 BJ**	<0.00330	<0.00358	**0.00148 BJ**	**0.00165 BJ**	<0.00286	<0.0543	<0.00334	**0.00179 BJ**	<0.00334	<0.00336
Ethylbenzene	**5.8**	**25**	**0.0017**	<0.00373	<0.00343	<0.00352	<0.00330	<0.00358	<0.00302	<0.00360	<0.00286	<0.0543	<0.00334	**0.00127 J**	**0.0278**	<0.00336
Isopropylbenzene (Cumene)	**1,900**	**9,900**	**0.74**	<0.00373	<0.00343	<0.00352	<0.00330	<0.00358	<0.00302	<0.00360	<0.00286	<0.0543	<0.00334	<0.00390	**0.00261 J**	<0.00336
p-Isopropyltoluene	**170**	**1,100**	**0.0520**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	<0.00572	<0.109	<0.00669	<0.00781	**0.00432 J**	<0.00673
2-Butanone (MEK)	**27,000**	**190,000**	**1.2**	<0.149 C3 J3	<0.137 C3 J3	<0.141 C3 J3	<0.132 C3 J3	<0.143 C3 J3	<0.121 C3 J3	<0.144 C3 J3	<0.114	<2.17	<0.134	<0.156	**0.139 C5**	<0.135
Naphthalene	**2.0**	**8.6**	**0.00038**	<0.0186	<0.0171	<0.0176	<0.0165	<0.0179	<0.0151	<0.0180	<0.0143 C3	<0.271 J3	<0.0167	<0.0195	**0.0400**	<0.0168
n-Propylbenzene	**3,800**	**24,000**	**1.2**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	<0.00572	<0.109 C3	<0.00669 C3	<0.00781	**0.00767 C5**	<0.00673
Styrene	**6,000**	**35,000**	**1.3**	<0.0186	<0.0171	<0.0176	<0.0165	<0.0179	<0.0151	<0.0180	**0.00033 J**	<0.271	<0.0167	<0.0195	**0.0235**	<0.0168
Toluene	**4,900**	**47,000**	**0.76**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	**0.00881**	<0.109	<0.00669	**0.0495**	**0.107**	<0.00673
1,2,4-Trimethylbenzene	**300**	**1,800**	**0.081**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	<0.00572	<0.109	<0.00669	<0.00781	**0.0335**	<0.00673
1,2,3-Trimethylbenzene	**340**	**2,000**	**0.081**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	<0.00572	<0.109	<0.00669	<0.00781	**0.0263**	<0.00673
1,3,5-Trimethylbenzene	**270**	**1,500**	**0.087**	<0.00746	<0.00685	<0.00704	<0.00660	<0.00715	<0.00603	<0.00719	<0.00572	<0.109 C3	<0.00669 C3	<0.00781	**0.00804**	<0.00673
Xylenes, Total	**580**	**2,500**	**0.19**	<0.00969	<0.00891	<0.00915	<0.00858	<0.00930	<0.00784	<0.00935	**0.00104 J**	<0.141	<0.00870	**0.00651 J**	**0.116**	**0.00425 J**
SVOCs (8270C)																
Benzo(a)anthracene	**1.1**	**21**	**0.011**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.105 J**	<0.0388
Benzo(b)fluoranthene	**1.1**	**21**	**0.3000**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.191 J**	<0.0388
Benzo(g,h,i)perylene	NE	NE	NE	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.164 J**	<0.0388
Benzo(a)pyrene	**0.11**	**2.1**	**0.029**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.148 J**	<0.0388
Chrysene	**110**	**2,100**	**9.0**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.128 J**	<0.0388
Fluoranthene	**2,400**	**30,000**	**89**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.221 J**	<0.0388
Phenanthrene	NE	NE	NE	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.225 J**	<0.0388
Pyrene	**1,800**	**23,000**	**13**	<0.0382	<0.0394	<0.0401	<0.0386	<0.0400	<0.0367	<0.0406	<0.0357	<0.346	<0.0775	<0.410	**0.224 J**	<0.0388

Notes:
RSL = US Environmental Protection Agecy (EPA) Regional Screening Level (November 2024)
SSL = Risked-Based Soil Screening Level
mg/kg = milligram per kilogram
Only detected analytes shown (detected concentrations are **bold**)
Shading = Indicates an exceedance of the regulatory value with the corresponding color
NE = Not Established
RCRA = Resource Conservation and Recovery Act
[1] The CDPHE Background concentration is 11 mg/kg, per the Risk Management Guidance for Evaluating Arsenic Concentrations in Soil, reviewed/revised November 2024.
VOC = Volatile Organic Compounds
SVOC = Semivolatile Organic Compounds
NA = Not Analyzed

B: The same analyte is found in the associated blank.
C3: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C5: The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J: The identification of the analyte is acceptable; the reported value is an estimate.
J3: The associated batch QC was outside the established quality control range for precision.

CDPHE's SSL summary: We use the "Protection of Groundwater SSLs" that are found in the rightmost column of the most recent version of EPA RSL Summary Table (TR=1E-06, HQ=1)" as Screening Levels Protective of Groundwater Quality in Colorado. Some constituents have two different Protection of Groundwater SSLs. If the ground water beneath, and down gradient of, the Facility is used for drinking water, or is likely to be used in the future, the lowest (most-conservative) value of the "MCL-Based SSL" sub-column and the "Risk-based SSL" sub-column will be applicable as the Protection of Ground Water SSL. Facilities and their consultants are encouraged to work closely with their division project manager to determine the correct Protection of Ground Water SSL to use. We will continue to use standards and method established and employed by the Colorado Water Quality Control Commission as the https://cdphe.colorado.gov/air-water-soil-remedial-objectives

Table 2
Summary of Detected Analytes in Surface Water
Leyden Road Project
Leyden Road, Arvada, Colorado
Terracon Project No. 25247529

Analytes	Fraction	Leyden Creek - Stream Segment 18b Potentially Applicable Water Quality Standards (µg/L) Chronic Numeric (Reg 38[1])	Acute Numeric (Reg 38[1])	Chronic TVS (Reg 31[2],38[1])	Acute TVS (Reg 31[2],38[1])	Fish Ingestion (Reg 31[2])	DWS (Reg 31[2])	GW Std (Reg 41[3]) (µg/L)	**Leyden Creek** **3/20/25** **µg/L**
Dissolved RCRA Metals (6010B/7470A)									
Arsenic	Dissolved	0.02-10	340	150	340	7.6	0.02-10	10	<10
Barium	Dissolved	-	-	-	-	-	490 / 1,000	2,000	**56.2**
Cadmium	Dissolved	-	-	0.72	5.01	-	5	5	<2.0
Chromium III	Dissolved	-	-	130.75	1,005	-	50	100	<10.0
Lead	Dissolved	-	-	5.31	136.14	-	50	50	**3.35 J**
Mercury	Total Recoverable[4]	0.01	-	-	-	-	2	2	<0.200
Selenium	Dissolved	-	-	4.6	18.4	4,200	50	50	**7.59 J**
Silver	Dissolved	-	-	1.05	6.69	-	100	50	<5.0
VOCs (8260B) and SVOCs (8270C)									ND

µg/L - micrograms per liter

[1] Reg 38 - Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) Regulation No. 38 (5CCR 1002-38), Classifications and Numeric Standards for South Platte River Basin, Laramie Basin, Republic River Basin, Smoke Hill River Basin

[2] Reg 31 - CDPHE WQCD Regulation No. 31 (5CCR 1002-31), The Basic Standards & Methodologies for Surface Water

[3] Reg 41 - CDPHE WQCD Regulation No. 41 (5CCR 1002-41), The Basic Standards for Ground Water

[4] Reg 38 value based on total recoverable mercury which was not reported. Reg 31 and 41 values based on dissolved mercury which was reported

DWS - Domestic Water Supply
RCRA = Resource Conservation and Recovery Act
VOC - Volatile Organic Compounds
SVOC - Semi-volatile Organic Compounds
< - data flag indicates a non-detect reported by the laboratory at the indicated numeric concentration
J - data flag indicates a detected concentration reported below the laboratory reporting limit
NA - standard is not applicable to the stream segment based on the stream classification

NOTES

Mainstem of Leyden Creek and Van Bibber Creek from their source to their confluence with Ralston Creek.
Table Value Standard (TVS) values calcuated based on assumed hardness of 200 milligrams per liter (mg/L)

SET NO. _____

RALSTON VALLEY HIGH SCHOOL OFFSITE IMPROVEMENTS

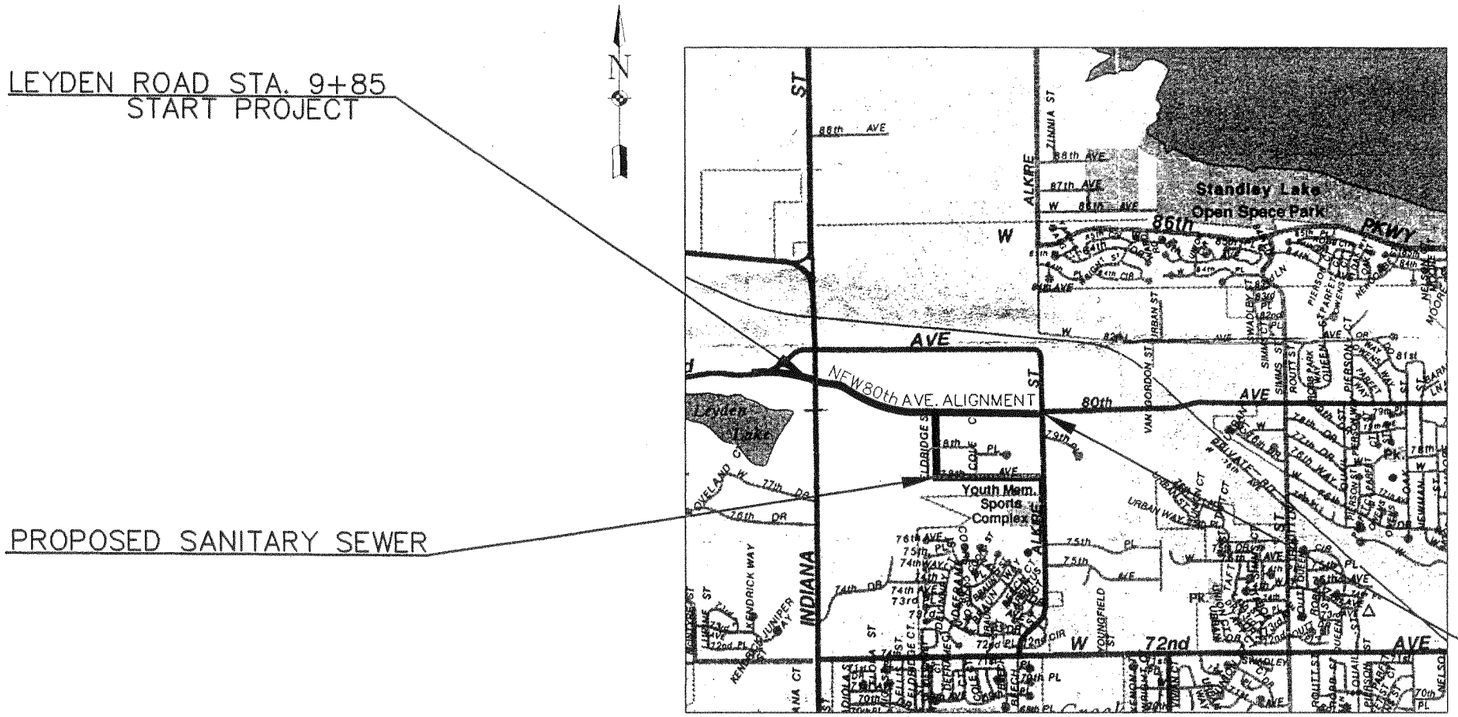
Prepared For

JEFFERSON COUNTY SCHOOL DISTRICT R-1

WEST 80TH AVENUE/ LEYDEN ROAD

CONSTRUCTION DOCUMENT SUBMITTAL

OCTOBER 11, 1999



VICINITY MAP

INDEX TO DRAWINGS

SHT. NO.	DESCRIPTION
1	COVER SHEET
TS-1 TO TS-3	TYPICAL SECTIONS
Q-1 TO Q-6	QUANTITY TABULATIONS
PP-1 TO PP-9	PLAN & PROFILES
GR-1 TO GR-3	INTERSECTION GRADING PLANS
SD-1 TO SD-5	STORM DRAINAGE
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TC-1 TO TC-4	TRAFFIC CONTROL PLANS
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L-1 TO L-4	LIGHTING & CONDUIT PLANS
SAN-1 TO SAN-3	OFFSITE SANITARY SEWER
ST-1 TO ST-4	OFFSITE STORM SEWER
1-7	WEST 76TH AVE SANITARY SEWER

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REVISIONS	DATE	BY
7		
6		
5		
4		
3 INDIANA ST REVISIONS	4/24/00	
2 WET UTILITIES REVISIONS	3/22/00	
1 RE-ISSUE #1	2/29/00	

PROJECT ENGINEER/ARCHITECT GLS DATE
PROJECT MANAGER SMcQ DATE
DEPT./BRANCH/AFFILIATE/MANAGER DATE
DRAWN BY DATE DRAWN 10/99
SCALE DATE ISSUED 7/99

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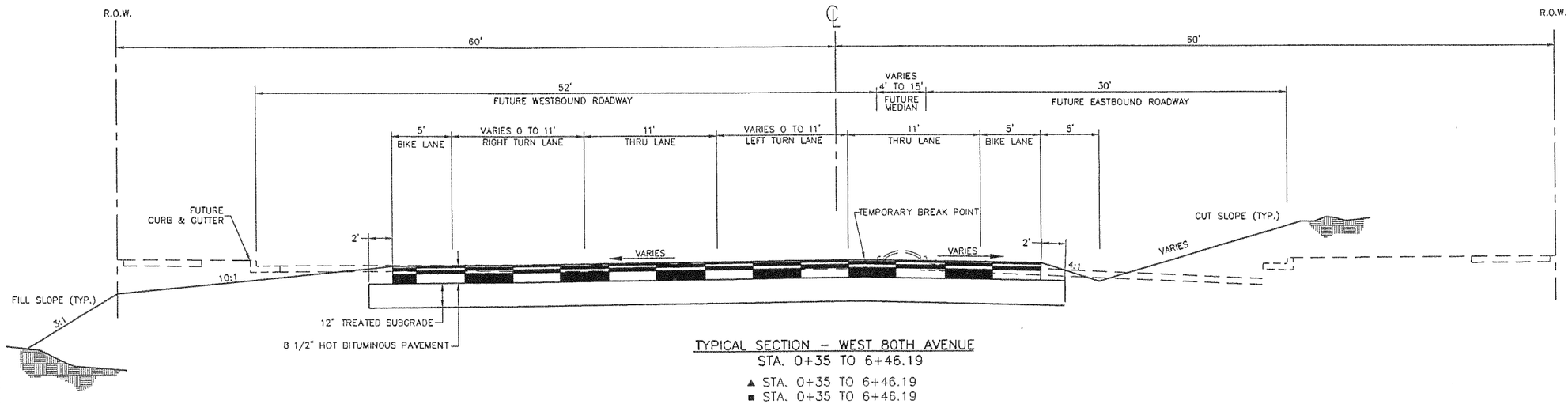
PROJECT: LEYDEN ROAD REALIGNMENT
JEFFERSON COUNTY

TITLE OF DRAWING: Cover Sheet

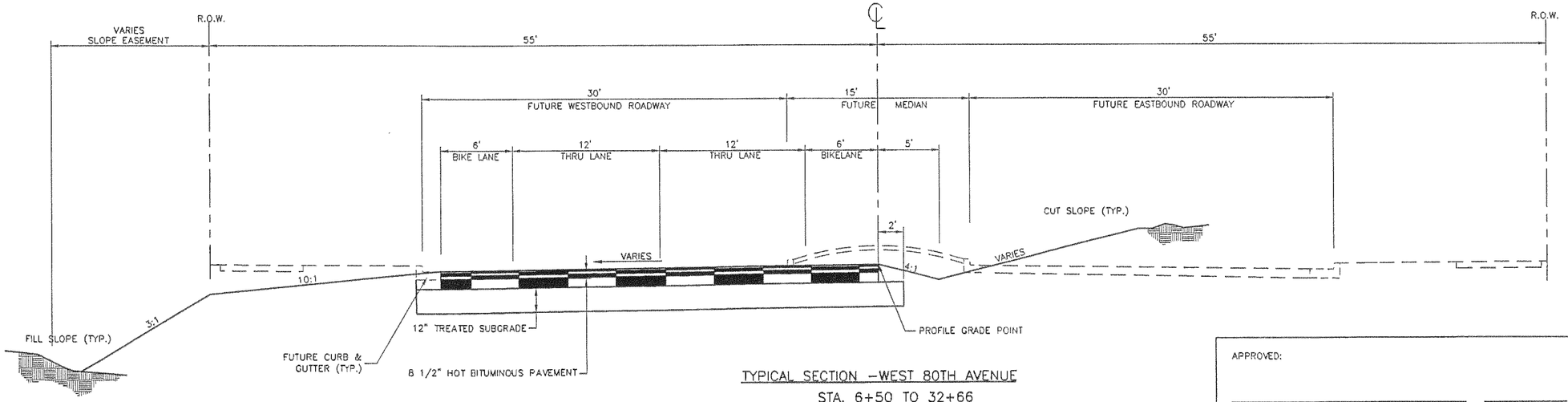
PROJECT NO 15345
DRAWING NO 1

22X34
SBD-2



TYPICAL SECTION – WEST 80TH AVENUE
STA. 0+35 TO 6+46.19

▲ STA. 0+35 TO 6+46.19
■ STA. 0+35 TO 6+46.19



TYPICAL SECTION –WEST 80TH AVENUE
STA. 6+50 TO 32+66

APPROVED:

CITY ENGINEER DATE JOB #

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1	REVISIONS	DATE	BY

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GLS
PROJECT MANAGER DATE
SMcQ
DEPT./BRANCH/AFFILIATE/MANAGER DATE
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PROJECT
RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
TYPICAL SECTIONS

PROJECT NO.
15345
DRAWING NO.
TS-1

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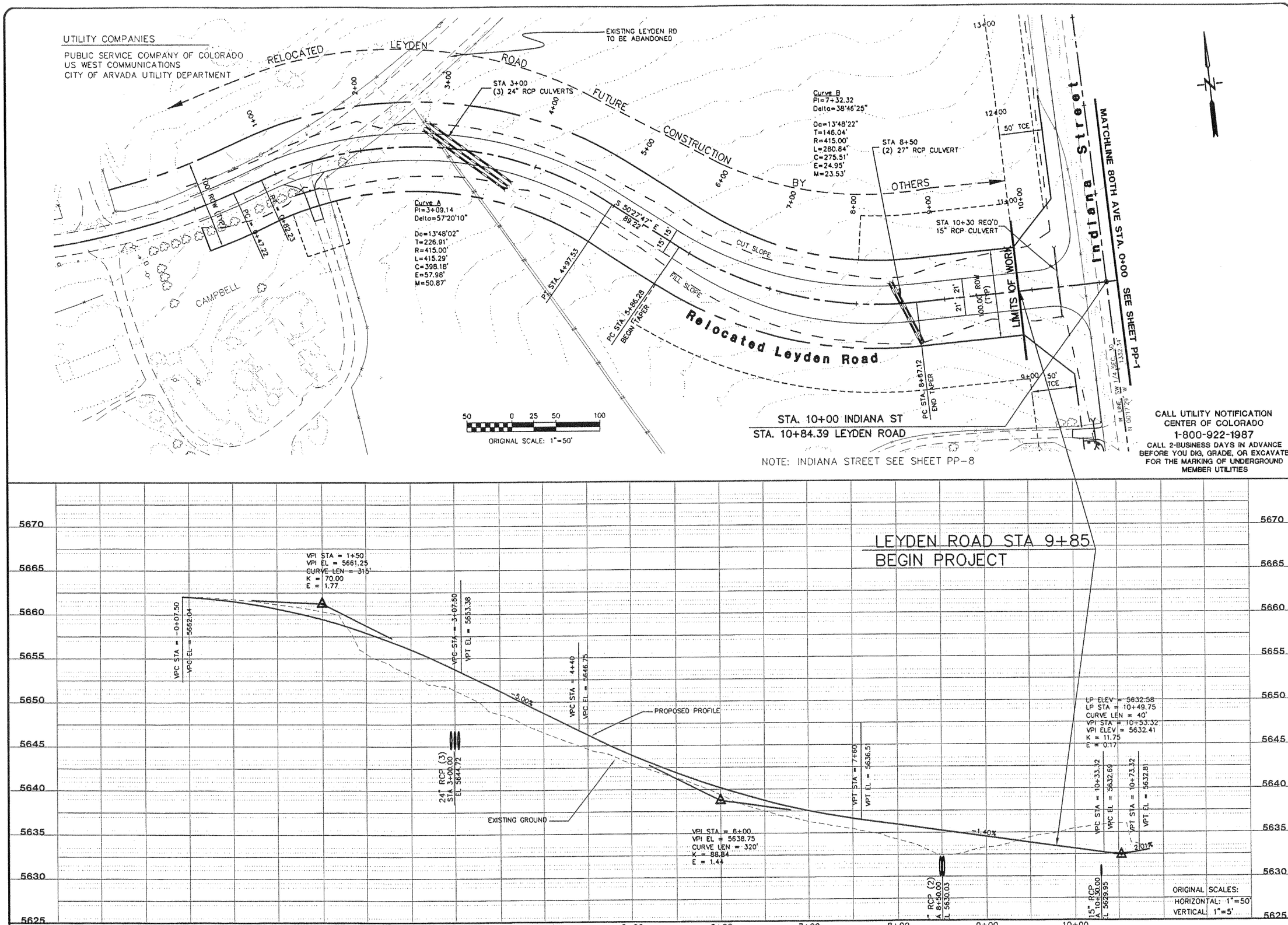

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PROJECT ENGINEER/ARCHITECT QLS — DATE
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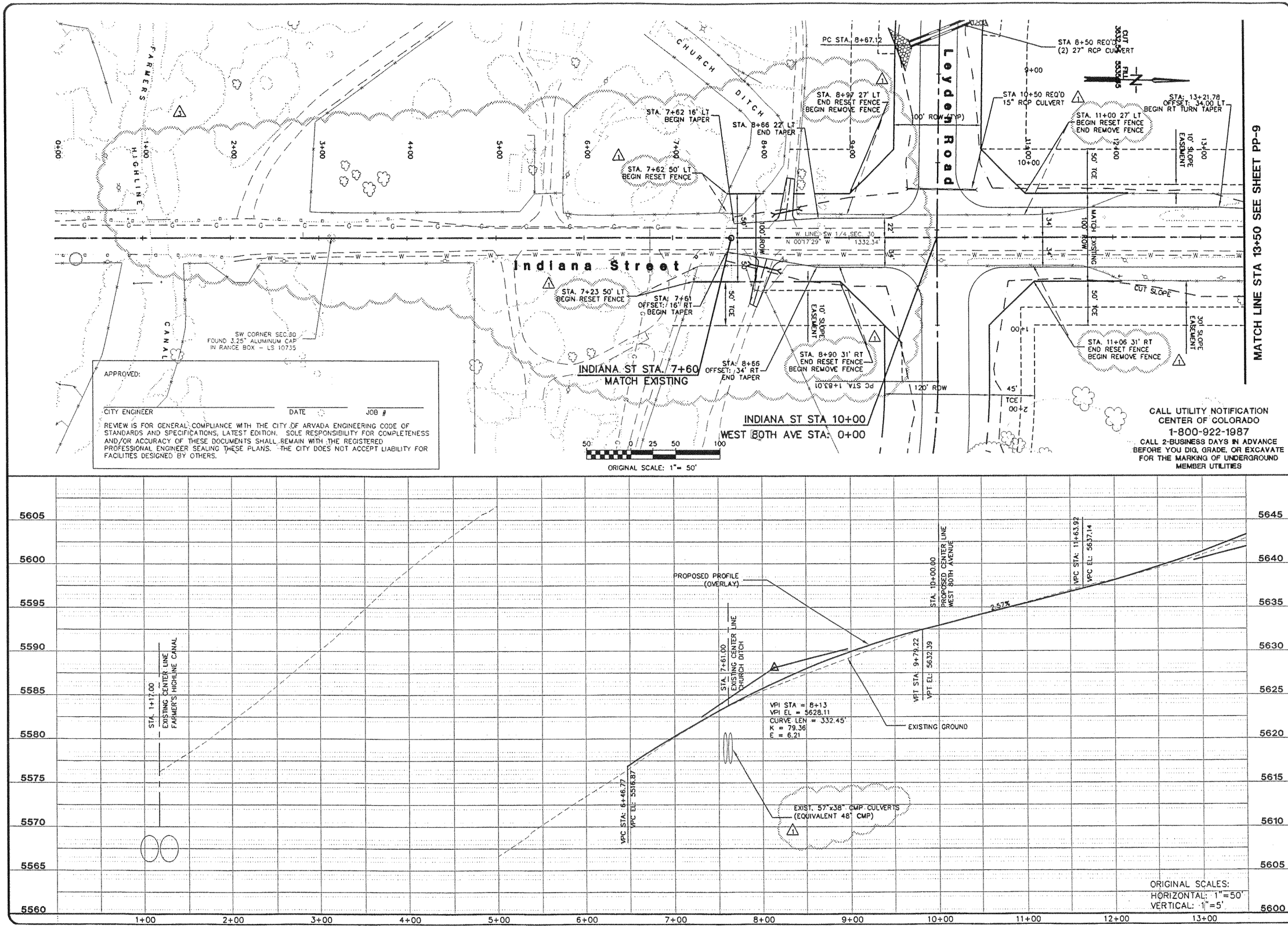
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
Leyden Rd P/P

PROJECT NO.
15345
DRAWING NO.
PP-1



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3	WET UTILITIES REVISIONS	3/27/00	
2	RE-ISSUE #1	2/29/00	
1	REVISIONS	DATE	BY

PROJECT ENGINEER/ARCHITECT GLS DATE
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LEYDEN ROAD REALIGNMENT
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TITLE OF DRAWING
INDIANA ST P/P

PROJECT NO.
15345
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PP-8

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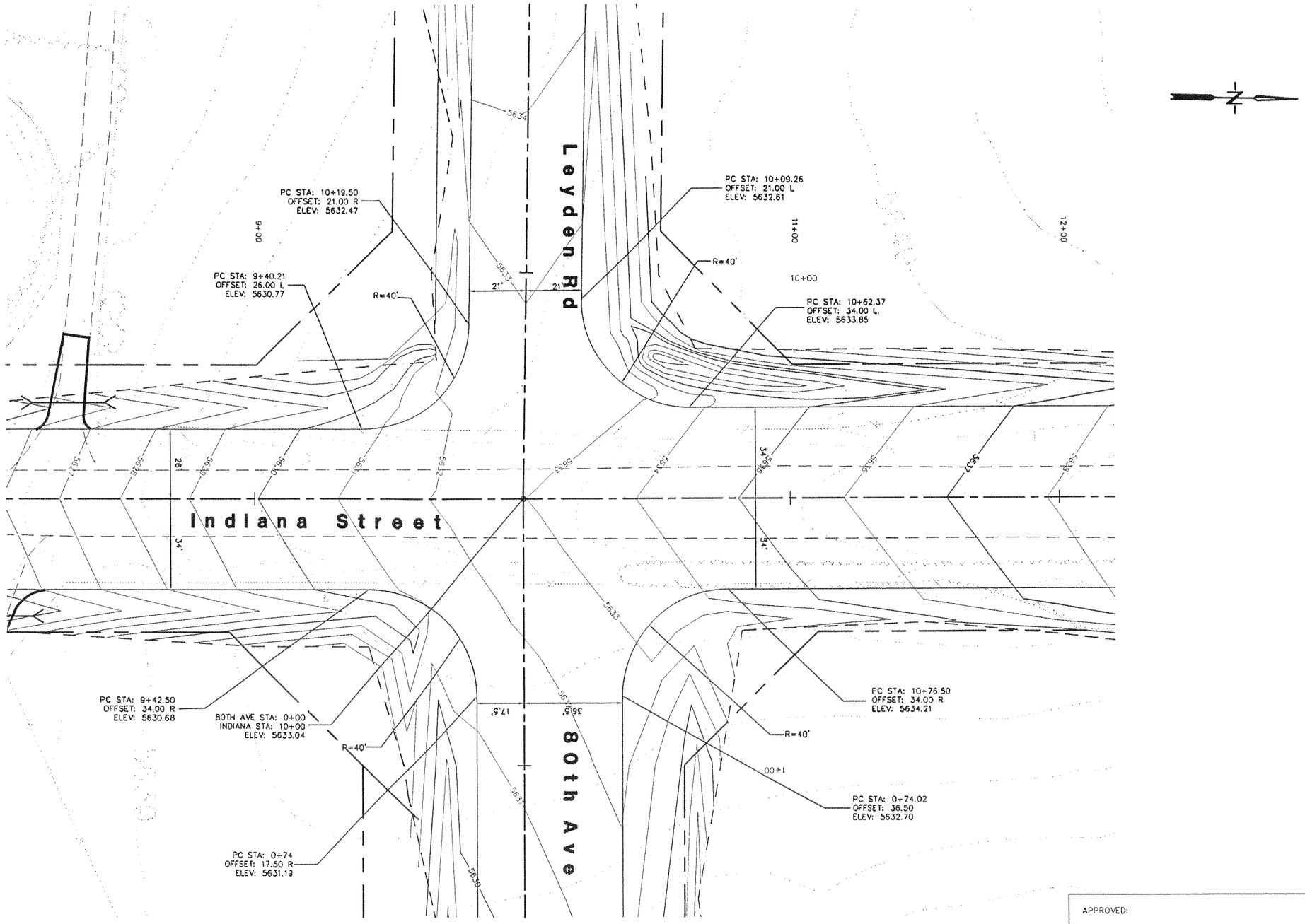

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SCHOOL DISTRICT R-1

TITLE OF DRAWING
Indiana St/80th Ave Grading Plan

PROJECT NO.
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DRAWING NO.
GR-1

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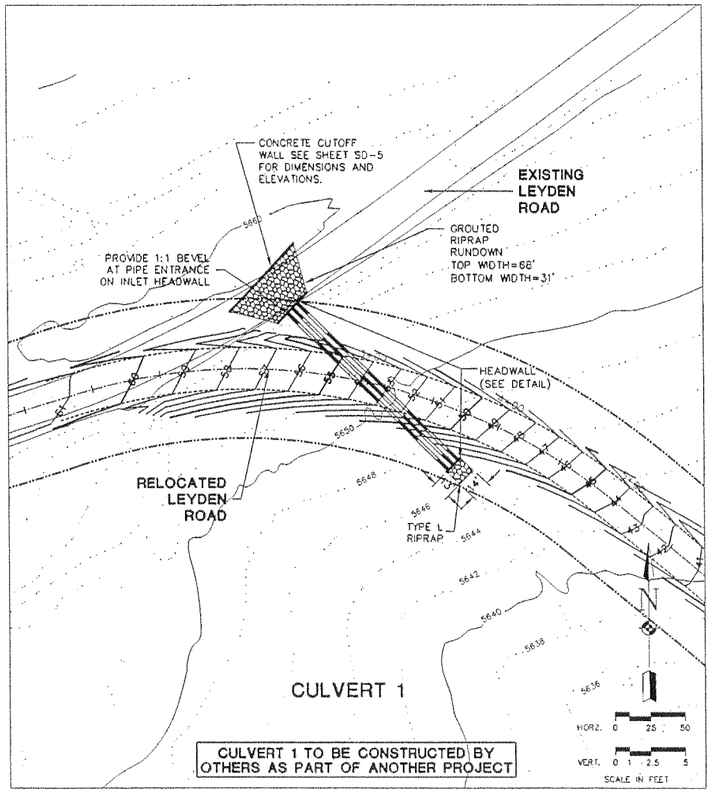
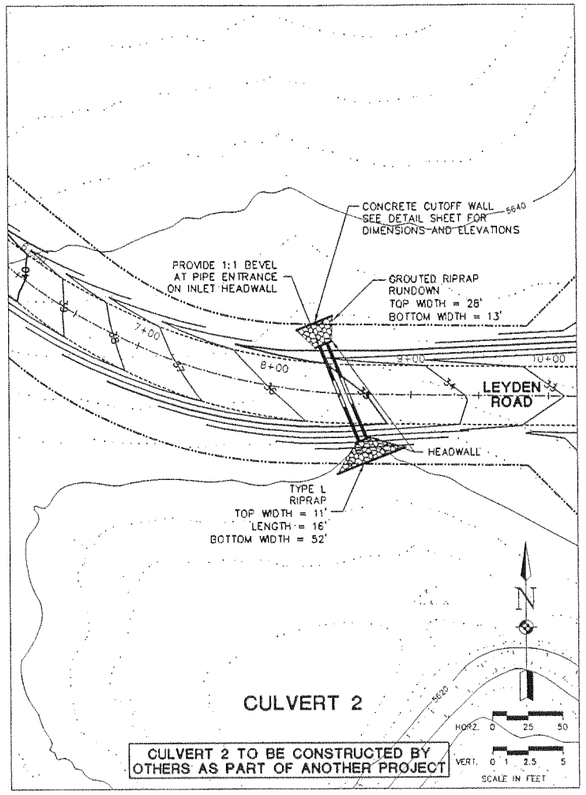
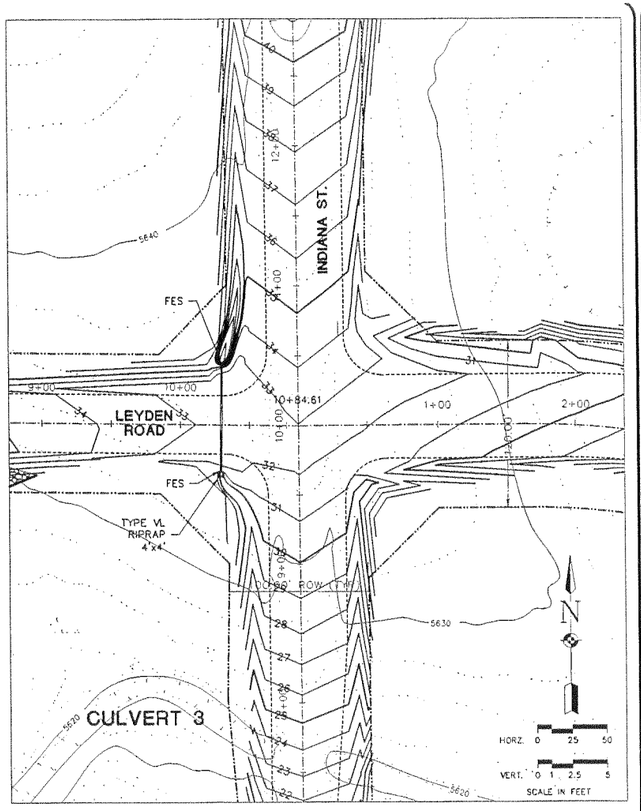
SBD-2







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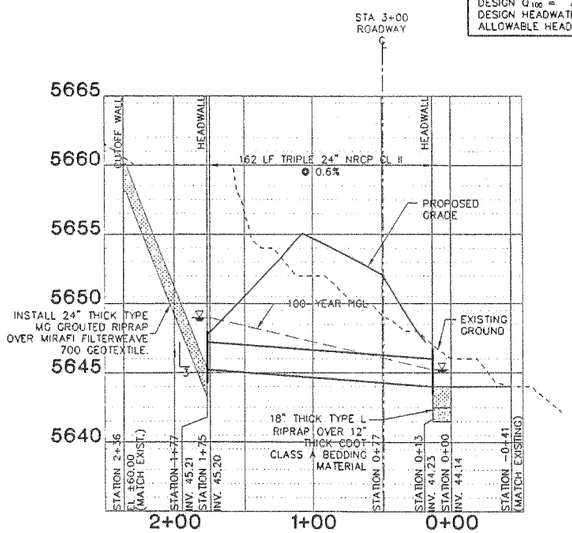

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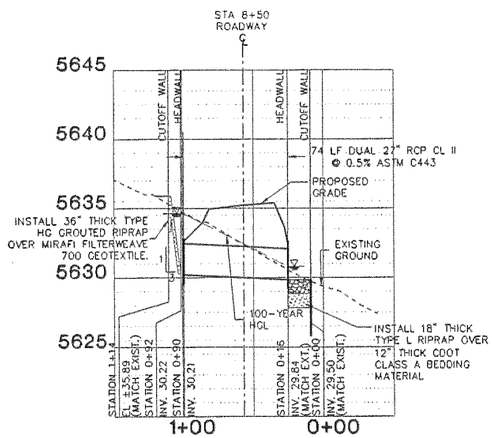

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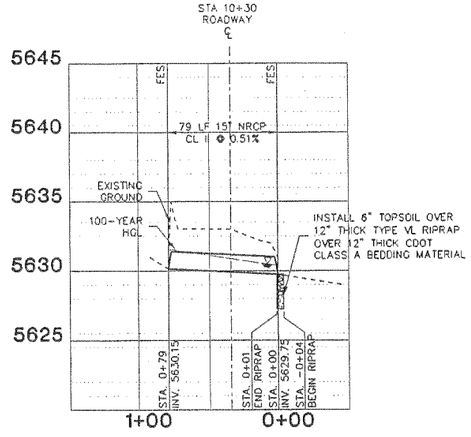
ALLOWABLE HEADWATER = 5632.65



CULVERT 3

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NO.	REVISIONS	DATE	BY
0			
1			
2			
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6			

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PROJECT ENGINEER/ARCHITECT
CCP 9/99
PROJECT MANAGER
KWC 9/99
DRAWN BY
CLO 9/99
SCALE
1"=50' 9/99
ISSUE DATE

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FULL-SERVICE DESIGN PROFESSIONALS
209 SOUTH MELDRUM
FORT COLLINS, CO. 80521-2603
(970) 482-1822
www.searbrown.com

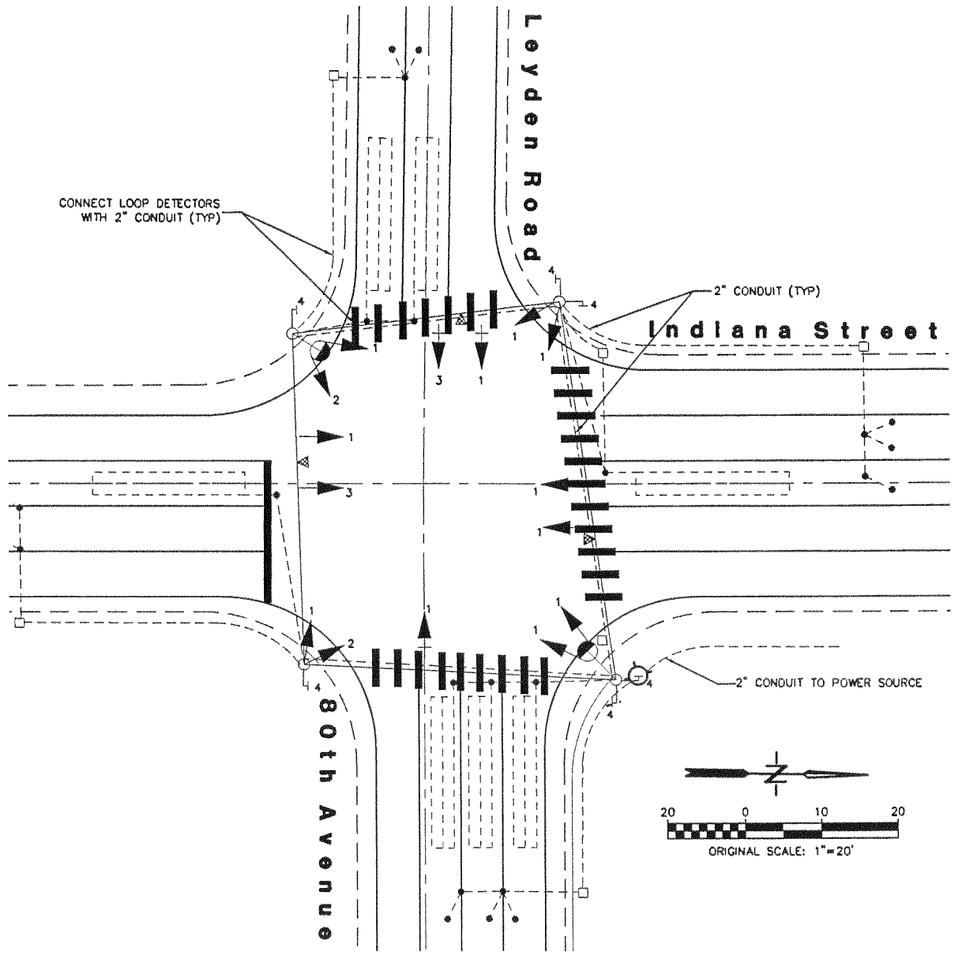
PROJECT
JEFFERSON COUNTY SCHOOL DISTRICT
80th AVENUE EXTENSION

TITLE OF DRAWING
CULVERT PLAN AND PROFILE

PROJECT NO
15345
DRAWING NO
SD-4

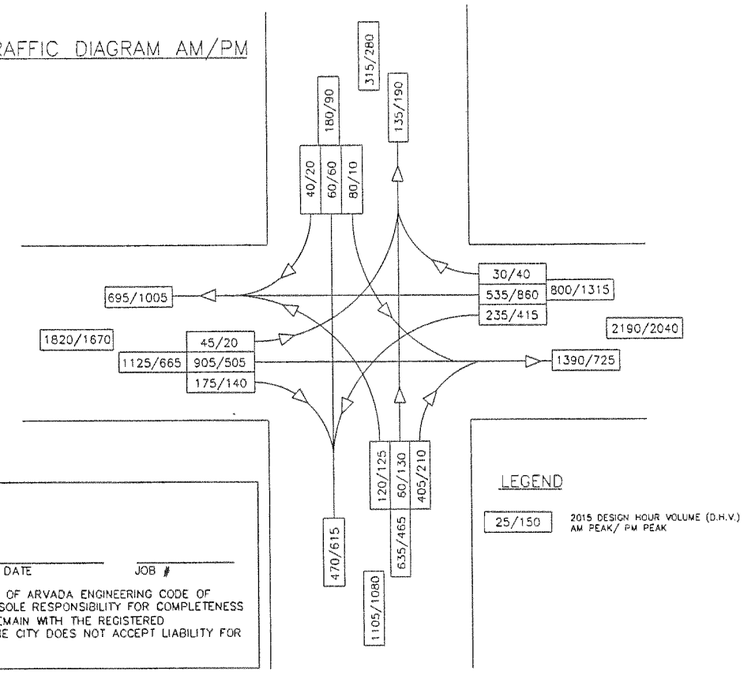
Plotted By: Schlosser, d
Plotted On: Jul 28, 2000 - 6:15pm
File: p:\15345\gfx\Culvert.dwg
XREFS:
DWG NAME: ACNEW.DWG
LAYER:

Plotting Parameters
Plotted By: Gerrit Slatter
Drawing File: L:\J0815\15345\civil\roads\Cd-dwg\sig-01.dwg
Plotted: Tuesday, February 29, 2000, 3:30:45 PM
Plot Config:



TRAFFIC SIGNAL PLAN

D.H.V. TRAFFIC DIAGRAM AM/PM



APPROVED:

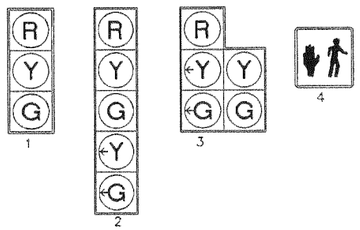
CITY ENGINEER _____ DATE _____ JOB # _____

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

LEGEND

SYMBOL	ITEM
○	TRAFFIC SIGNAL POLE
○→	TRAFFIC SIGNAL FACE W/ BACKPLATE
→○	TRAFFIC SIGNAL FACE
⊢○	PEDESTRIAN SIGNAL FACE
▷	PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b)
⬡	TRAFFIC SIGNAL CONTROLLER AND CABINET
□	PULL BOX - TYPE I (30"x18")
□	PULL BOX - TYPE II (18"x12")
⊗	PULL BOX - SPECIAL
———	CONDUIT - PVC SCHEDULE 40, TYPE 2
≡≡≡≡≡	VEHICLE LOOP DETECTOR (6'x40')
●—	MICROLOOP DETECTOR W/SAWCUT LEAD-IN
⊥	MAST ARM MOUNTED SIGN
⊥	POST MOUNTED SIGN
⊥	EXISTING POST MOUNTED SIGN
—◐	EXISTING LUMINAIRE
—◐	PROPOSED LUMINAIRE
◁	EMERGENCY VEHICLE DETECTOR

SIGNAL HEAD CONFIGURATIONS



NOTES:

1.) THE TRAFFIC SIGNALS WILL BE CONSTRUCTED IN TWO PHASES. PHASE 1 WILL INCLUDE UNDERGROUND CONDUIT, LOOP DETECTORS, AND STREET LIGHTING ONLY. PHASE 2 WILL BE COMPLETED AT SUCH TIME AS TRAFFIC WARRANTS ARE MET AND WILL INCLUDE THE REMAINING ITEMS TO MAKE THE SIGNALS OPERATIONAL.

2.) THE COST OF WIRING SHALL BE INCLUDED IN THE COST OF THE TRAFFIC SIGNALS.

3.) THE COST OF PULL BOXES SHALL BE INCLUDED IN THE COST OF CONDUIT.

4.) SEE LIGHTING PLANS FOR LIGHTING QUANTITIES.

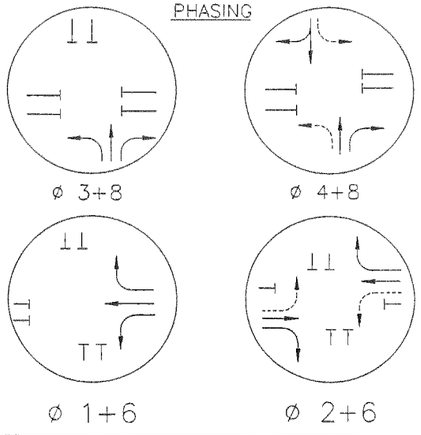
5.) PEDESTRIAN PUSH BUTTONS SHALL INCLUDE DECAL SIGN (R10-4) WHICH INCLUDES PEDESTRIAN INSTRUCTIONS AND DIRECTIONAL ARROWS TO DESIGNATE THE APPROPRIATE CROSS WALK.

6.) CDOT RADIO COMMUNICATIONS HARDWARE SHALL BE PLACED AT NORTHEAST TRAFFIC SIGNAL POLE. SEE DETAIL INCLUDED IN PROJECT SPECIFICATIONS. COST SHALL BE INCLUDED IN COST OF TRAFFIC SIGNAL CONTROLLER.

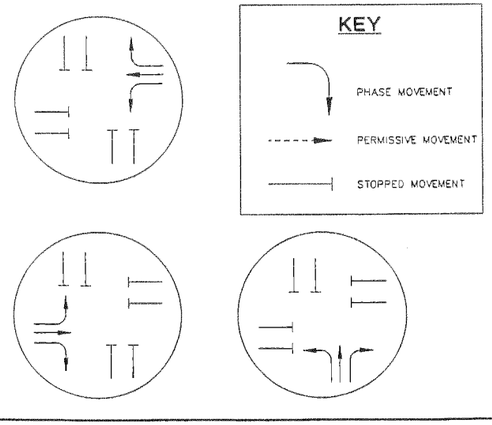
LIST OF MATERIALS

ITEM DESCRIPTION	UNIT	QUANTITY
2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	1000
LUMINAIRE HIGH PRESSURE SODIUM (250 WATT)	EACH	2
TRAFFIC SIGNAL FACE (12-12-12)	EACH	10
TRAFFIC SIGNAL FACE (12-12-12-12-12)	EACH	4
PEDESTRIAN PUSH BUTTON	EACH	6
PEDESTRIAN SIGNAL FACE (16)	EACH	6
LOOP DETECTOR WIRE	LF	2600
FIRE PRE-EMPTION UNIT	EACH	3
LOOP DETECTOR (MICRO TYPE)	EACH	11
TRAFFIC SIGNAL VEHICLE DETECTOR AMPLIFIER	EACH	4
TRAFFIC SIGNAL-LIGHT SPAN WIRE POLE (12 INCH)	EACH	4
TRAFFIC SIGNAL CONTROLLER (TYPE 170)	LF	1

PHASING



FIRE PREEMPTION PHASING



7							
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	REVISIONS					DATE	BY

PROJECT ENGINEER/ARCHITECT DATE
QLS
PROJECT MANAGER DATE
SMcG
DEPT./BRANCH/AFFIHATE/MANAGER DATE

DRAWN BY DATE DRAWN 7/99
QLS
SCALE 1"=20' DATE ISSUED 7/99

THE SEAR-BROWN GROUP
FULL-SERVICE DESIGN PROFESSIONALS
2420 WEST 26TH AVENUE, SUITE 400D
DENVER, CO 80211-5305
(303) 458-5528

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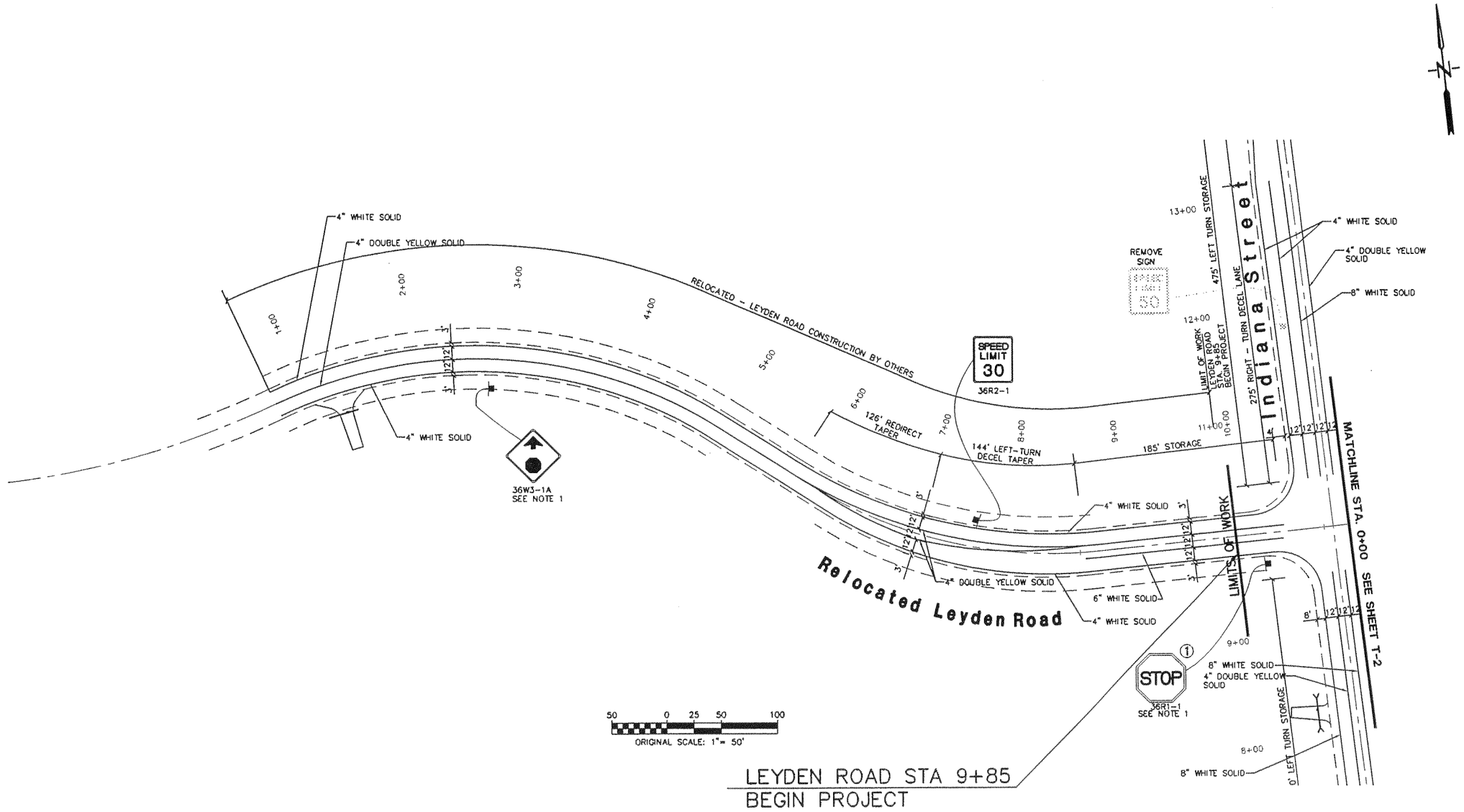
PROJECT
RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
Indiana St/80th Ave Signal Plan

PROJECT NO.
15345
DRAWING NO.
SIG-1

22X34
SBD-2



NOTES: 1. SIGN TO BE REMOVED OR REPLACED WITH ANOTHER SIGN ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION.

Plotting Parameters
Plotted By: Gerrit Slatter
Drawing File: L:\JOBS\15345\civil\roads\Cd.dwg\T-01.dwg
Plotted: Thursday, January 20, 2000, 3:56:55 PM
Plot Config.

REVISIONS	DATE	BY
7		
6		
5		
4		
3		
2		
1		

PROJECT ENGINEER/ARCHITECT GLS DATE
PROJECT MANAGER SMcQ DATE
DEPT./BRANCH/AFFILIATE/MANAGER DATE
DRAWN BY GLS DATE DRAWN 7/99
SCALE 1"=50' DATE ISSUED 7/99

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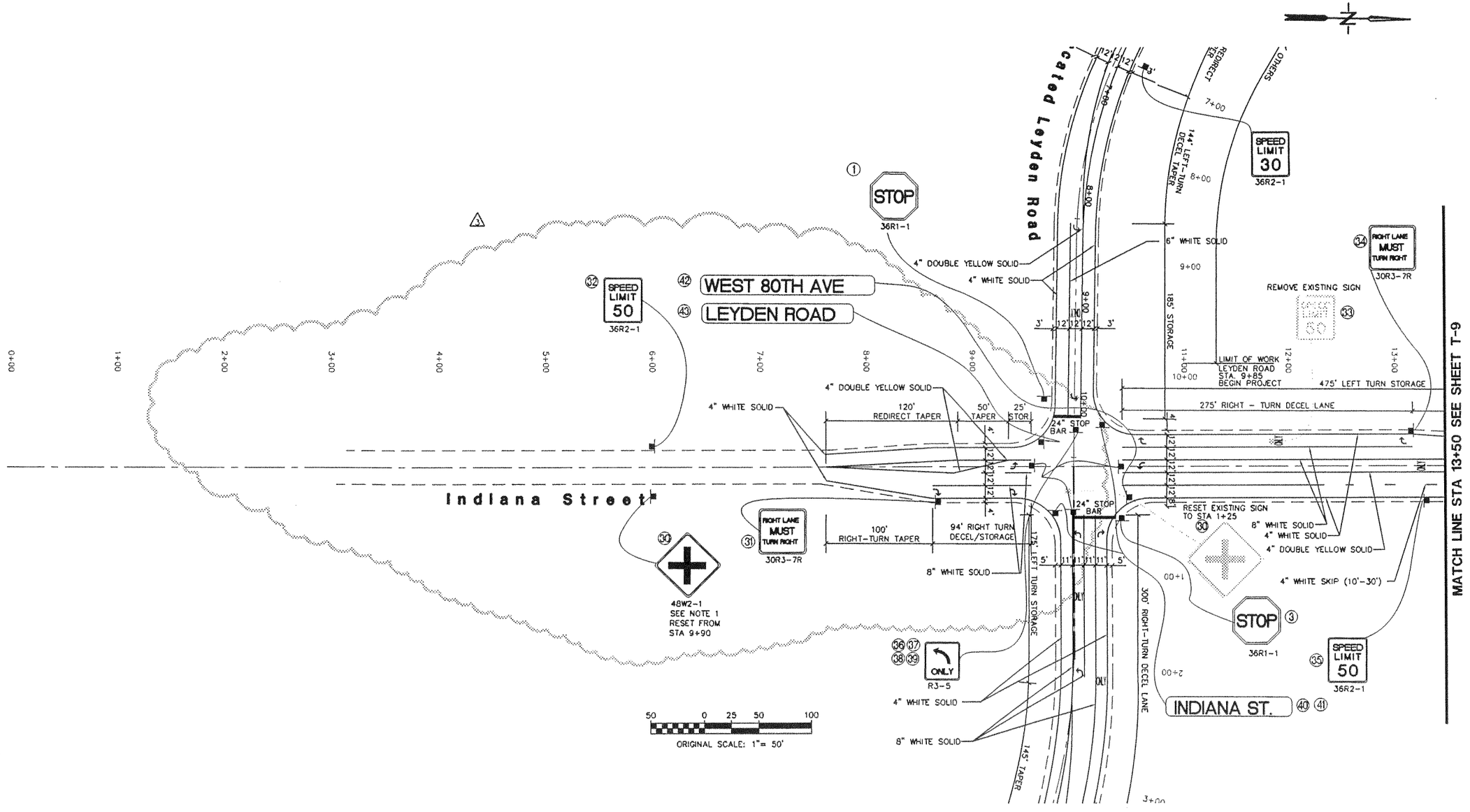
PROJECT
RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
Leyden Rd Signing/Striping

PROJECT NO.
15345
DRAWING NO.
T-1

22X34
SBD-2

Plotting Parameters
Plotted By: Gerri Slatter
Drawing File: L:\JOBS\15345\civil\roads\Cd-dwg\T-0702.dwg
Plotted: Monday, April 24, 2000, 9:14:46 PM
Plot Config



NOTES:
1. SIGN TO BE REMOVED OR REPLACED WITH ANOTHER SIGN ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION.
2. STREET NAME SIGNS AND LANE DESIGNATION SIGNS SHALL BE ATTACHED TO TRAFFIC SIGNAL SPAN WIRE.
3. STOP BAR PAVEMENT MARKINGS TO BE REPLACED WITH CONTINENTAL TYPE CROSS-WALKS ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION. SEE TRAFFIC SIGNAL PLANS.

APPROVED:

CITY ENGINEER _____ DATE _____ JOB # _____

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

7			
6			
5			
4	INDIANA ST REVISIONS	4/24/00	
3	WET UTILITIES REVISIONS	3/27/00	
2	RE-ISSUE #1	2/29/00	
	REVISIONS	DATE	BY

PROJECT ENGINEER/ARCHITECT DATE
QLS
PROJECT MANAGER DATE
SMO
DEPT./BRANCH/ATTEMATE/MANAGER DATE
DRAWN BY DATE DRAWN
QLS 10/99
SCALE DATE ISSUED
1"=50' 7/99

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GOLDEN, CO 80401
(303) 271-9388

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PROJECT
LEYDEN ROAD REALIGNMENT
JEFFERSON COUNTY

TITLE OF DRAWING
INDIANA ST SIGNING & STRIPING

PROJECT NO.
15345
DRAWING NO.
T-7

22X34
SBG-2

AS-BUILT SURVEY COMPLETED BY WSB

ENGINEERING REDOR DRAWING COMPLETED BY EVSTUDIO

THESE IMPROVMENTS HAVE BEEN CONSTRUCTED IN SUBSTATNIAL COMPLANCE WITH CONSTRUCTION DRAWINGS APPROVED BY ARVADA

CONSTRUCTION PLANS

FOR

LEYDEN RANCH EAST SUBDIVISION
JEFFERSON COUNTY, CO

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON , STATE OF COLORADO

04/9/2020

OWNER / DEVELOPER

LEYDEN PROPERTIES, LLC
3002 S. HURON STREET
ENGLEWOOD, CO 80110
CONTACT: BRYANT WINSLOW
PHONE: (303) 781-5535
FAX: (303) 761-7413

CIVIL ENGINEER / SURVEYOR

JeHN ENGINEERING, INC.
5690 WEBSTER STREET
ARVADA, CO 80002
CONTACT: ARNOLD NIEMEYER
PHONE: (303) 423-6036
FAX: (303) 467-9438

LANDSCAPE ARCHITECT

PCS GROUP, INC.
#3 INDEPENDENCE PLAZA B-180
1001 16TH STREET
DENVER, CO 80265
CONTACT: JIM IVY
PHONE: (303) 531-4905

UTILITIES

PHONE:
CENTURYLINK
DEVELOPER CONTACT GROUP
P.O. BOX 1720
DENVER, CO 80201
PHONE: (303) 451-2703

CABLE TV:
AT&T CABLE SERVICES
8470 NORTH UMATILLA STREET
FEDERAL HEIGHTS, CO 80260
CONTACT: RICK SHANNON
PHONE: (303) 603-6704
OR (303) 603-6717

GAS AND ELECTRIC:
EXCEL ENERGY OF COLORADO
1123 WEST 3rd AVENUE
DENVER, CO 80223
PHONE: (303) 534-6700

WATER, SANITARY, AND STORM SEWER:
CITY OF ARVADA
8101 RALSTON ROAD
ARVADA, CO 80001
PHONE: (720) 898-7640

FIRE PROTECTION

ARVADA FIRE PROTECTION DISTRICT
KEVIN FERRY, FIRE MARSHAL
7903 ALLISON WAY
ARVADA, CO 80005
PHONE: (303) 424-3012

LEGAL DESCRIPTION

THE UNDERSIGNED, BEING THE OWNERS OF A PARCEL OF LAND SITUATED IN THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6th PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST ¼ CORNER OF SAID SECTION 25, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 25 BEARS SOUTH 00°28'44" EAST A DISTANCE OF 2644.57 FEET;
THENCE SOUTH 00°28'38" EAST, ALONG THE EAST LINE OF SAID SOUTHEAST ¼ OF SECTION 25 A DISTANCE OF 980.20 FEET TO A POINT;
THENCE SOUTH 89°31'12" WEST A DISTANCE OF 50.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF COLORADO HIGHWAY NO. 72 AND THE NORTHERLY RIGHT-OF-WAY LINE OF THE DENVER AND INTERMOUNTAIN RAILWAY COMPANY AS DESCRIBED IN BOOK 173 AT PAGE 338, JEFFERSON COUNTY PUBLIC RECORDS, ALSO BEING THE POINT OF BEGINNING;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING (3) COURSES:

1. SOUTH 00°28'38" EAST, ALONG A LINE 50.00 FEET WESTERLY OF AND PARALLEL WITH SAID EAST LINE OF THE SOUTHEAST ¼ OF SECTION 25, A DISTANCE OF 202.73 FEET TO A POINT;
2. THENCE SOUTH 44°31'22" WEST A DISTANCE OF 70.70 FEET TO A POINT;
3. THENCE SOUTH 00°28'38" EAST A DISTANCE OF 2.75 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LEYDEN ROAD;

THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE THE FOLLOWING TWO (2) COURSES:

1. THENCE NORTH 80°53'15" WEST A DISTANCE OF 10.47 FEET TO A POINT OF CURVE;
2. THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 291.03 FEET, A CENTRAL ANGLE OF 38°05'50", WHOSE CHORD BEARS SOUTH 80°03'51" WEST A DISTANCE OF 189.96 FEET, FOR AN ARC DISTANCE OF 193.51 FEET;

THENCE SOUTH 30°47'41" EAST, A DISTANCE OF 26.49 FEET;
THENCE SOUTH 57°26'32" WEST, A DISTANCE OF 40.15 FEET;
THENCE SOUTH 55°46'01" WEST, A DISTANCE OF 37.41 FEET;
THENCE SOUTH 53°09'56" WEST, A DISTANCE OF 430.40 FEET;
THENCE SOUTH 54°55'37" WEST, A DISTANCE OF 48.50 FEET;
THENCE SOUTH 55°37'21" WEST, A DISTANCE OF 39.25 FEET;
THENCE SOUTH 58°13'34" WEST, A DISTANCE OF 4.93 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 792.99 FEET, A CENTRAL ANGLE OF 02°28'04", WHOSE CHORD BEARS SOUTH 57°55'34" WEST A DISTANCE OF 34.15 FEET, FOR AN ARC DISTANCE OF 34.15 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 465.00 FEET, A CENTRAL ANGLE OF 06°51'39", WHOSE CHORD BEARS SOUTH 87°03'33" WEST A DISTANCE OF 55.65 FEET, FOR AN ARC DISTANCE OF 55.68 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 768.44 FEET, A CENTRAL ANGLE OF 23°46'50", WHOSE CHORD BEARS SOUTH 74°43'02" WEST A DISTANCE OF 316.66 FEET, FOR AN ARC DISTANCE OF 318.94 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND SHOWN AS SCHEDULE NO. 199861 BY THE JEFFERSON COUNTY ASSESSOR;

THENCE ALONG THE BOUNDARY OF SAID PARCEL OF LAND THE FOLLOWING TWO (2) COURSES:

1. THENCE NORTH 12°00'56" EAST A DISTANCE OF 561.28 FEET TO A POINT;
2. THENCE NORTH 41°20'58" EAST A DISTANCE OF 351.52 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN BOOK 2315 AT PAGE 979, JEFFERSON COUNTY PUBLIC RECORDS;

THENCE SOUTH 59°10'08" EAST, ALONG SAID SOUTHWESTERLY LINE, A DISTANCE OF 407.33 FEET TO A POINT OF NON-TANGENCY, SAID POINT BEING ON SAID NORTHERLY RIGHT-OF-WAY LINE OF DENVER AND INTERMOUNTAIN RAILWAY COMPANY;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE ALONG A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 25°53'09", A RADIUS OF 982.00 FEET, AN ARC LENGTH OF 443.66 FEET, AND A CHORD BEARING NORTH 68°11'33" EAST A DISTANCE OF 439.90 FEET TO THE POINT OF BEGINNING;
CONTAINING 452,324 SQ. FT. OR 10.384 ACRES±.

COUNTY OF JEFFERSON,
STATE OF COLORADO

HORIZONTAL DATUM

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS-DREXEL GROUP ALTA/ACSM SURVEY 7-21-06

VERTICAL DATUM - SITE BENCHMARK

PROJECT BENCHMARK: EAST ¼ CORNER SECTION 25, T. 2 S., R. 70 W., 6TH PM, A 2-1/2" ALUMINUM CAP IN A RANGE BOX LS 28286 DATED 2006. ELEVATION = 5717.92 CITY OF ARVADA

PROJECT DATUM: CITY OF ARVADA ELEVATION = NAVD 88 - 2.5'

BASIS OF BEARINGS

BASIS OF BEARING: BEARINGS ARE BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, JEFFERSON COUNTY, COLORADO AS BEING MONUMENTED AT THE SOUTHEAST CORNER WITH A 2.5" ALUMINUM CAP IN A RANGE BOX PLS 11434 AND AT THE EAST QUARTER CORNER WITH A 2.5" ALUMINUM CAP IN A RANGE BOX PLS 11434 WITH REFERENCE TIES BEARING NORTH 00°28'38" WEST A DISTANCE OF 2644.75 FEET.

LEGEND

	EXISTING	PROPOSED
BOUNDARY		
RIGHT-OF-WAY		
LOT LINE		
SANITARY SEWER	8" SAN	8" SAN
STORM SEWER	18" STM	18" STM
WATER LINE	8" WAT	8" WAT
WATER SERVICE		W/S
SANITARY SERVICE		S/S
IRRIGATION LINE	EXIST PIPE	18" IRR
EASEMENT LINE		
CONTOUR LINE	801	801
CURB & GUTTER		
SECTION LINE		
FENCE		
SANITARY SEWER MH	Ⓢ	●
STORM SEWER MH	Ⓓ	●
WATER MH	Ⓦ	
TELEPHONE MH	Ⓣ	
WATER VALVE	⋈	⋈
FIRE HYDRANT		

CITY OF ARVADA STANDARD DETAILS

SURFACE DRAINAGE
SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD-11
SD-14
SD-18
SD-19
SD-21
SD-22

STREETS
ST-4
ST-10
ST-11
ST-12
ST-17

TRAFFIC
TR-1
TR-9

SANITARY
SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
SS-7
SS-13

STORM WATER
SW-1
SW-3
SW-4
SW-5
SW-6
SW-7
SW-8
SW-8a
SW-9
SW-9a
SW-10
SW-11

WATER
W-1
W-3
W-4
W-6
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W-9
W-10
W-11
W-12
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W-47
W-48
W-49
W-50
W-51

WATER
W-52
W-54
W-55
W-56
W-57
W-58
W-59
W-65

WATER METERS
W-31
W-32
W-33
W-34
W-35
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W-44
W-45

WATER METER VAULTS
W-38
W-39
W-40
W-41
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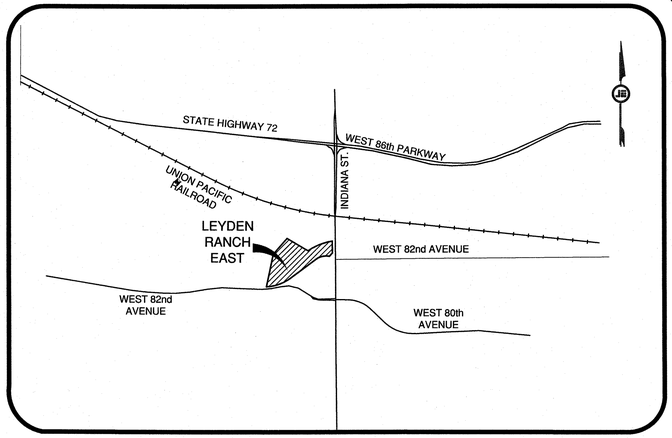
W-43



VICINITY MAP

SCALE: 1"=1200'

Sheet List Table

Sheet Number	Sheet Title
0.0	COVER SHEET
0.1	GENERAL NOTES
0.2	PUBLIC IMPROVEMENT QUANTITIES
1.0	OVERALL GRADING PLAN
1.1	DETAILED GRADING
1.2	EROSION CONTROL INITIAL
1.3	EROSION CONTROL INTEREM
1.4	EROSION CONTROL FINAL
2.1	OVERALL UTILITY PLAN
2.2	SITE PLAN
2.3	HORIZONTAL CONTROL PLAN
3.1	WEST 82nd PLACE
3.2	WEST 82nd PLACE AND EMERGENCY ACCESS ROAD
3.3	JOYCE CIRCLE
3.4	LEYDEN ROAD IMPROVEMENTS
3.5	WEST LEYDEN TRAIL CONNECTION
4.1	STORM DRAIN AND IRRIGATION DRAIN - PLAN & PROFILE
4.2	RAIN GARDEN PLAN AND DETAILS
4.3	RAIN GARDEN PLAN & PROFILE
4.4	OFFSITE RUNOFF BYPASS PLAN & PROFLE
4.5	HEADWALL DETAILS
5.1	DETENTION POND AND OUTLET STRUCTURE DETAILS
5.2	POND FOREBAY AND TRICKLE CHANNEL DETAIL
6.1	WEST 82nd PLACE
6.2	JOYCE CIRCLE
6.3	LEYDEN ROAD
7.1	WEST 82nd PLACE - 1
7.2	WEST 82nd PLACE - 2
7.3	JOYCE CIRCLE
8.1	SIGNAGE AND STRIPING PLAN
8.2	LEYDEN ROAD (W 82nd) STRIPING PLAN
9.0	DETAILS

RESPONSIBILITY STATEMENT

THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN OR DIMENSIONS AND ELEVATIONS ON THE PLANS. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

APPROVALS

THESE CONSTRUCTION PLANS FOR LEYDEN RANCH EAST SUBDIVISION WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS.

JOSEPH A. JEHN, P.E. NO. 15756
JEHN ENGINEERING

23 July 20
DATE

APPROVED:

Jenny Wolfschlag P.E.
CITY ENGINEER

7/23/20
DATE

3363
JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REVISED PER CITY COMMENTS	3/4/15	BWV
2	REVISED PER CITY COMMENTS	4/29/15	MB
3	REVISED PER CITY COMMENTS	11/6/19	AHN
4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

JeHN ENGINEERING
8690 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN RANCH EAST
COVER SHEET
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111COVR.dwg
APPROVED BY:
JOB NUMBER: 2016-213-111
DATE: 04/9/2020
SCALE: NA
SHEET NO: 0.0 OF 30

RECORD DRAWING

C:\RICK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-COVR.dwg, 7/16/2020 11:00:33 AM

LEGEND

	EXISTING	PROPOSED
BLOCK NUMBER		1
LOT NUMBER		25
BOUNDARY		
RIGHT OF WAY		
LOT LINE		
CONTOUR LINE	801	801
SECTION LINE		
EASEMENT LINE		
PROP. HIGH POINT		HP
PROP. LOW POINT		LP
PROP. WALKOUT LOT GRADING		WO
PROP. TYPE "A" LOT GRADING		A
PROP. TYPE "G" LOT GRADING		G

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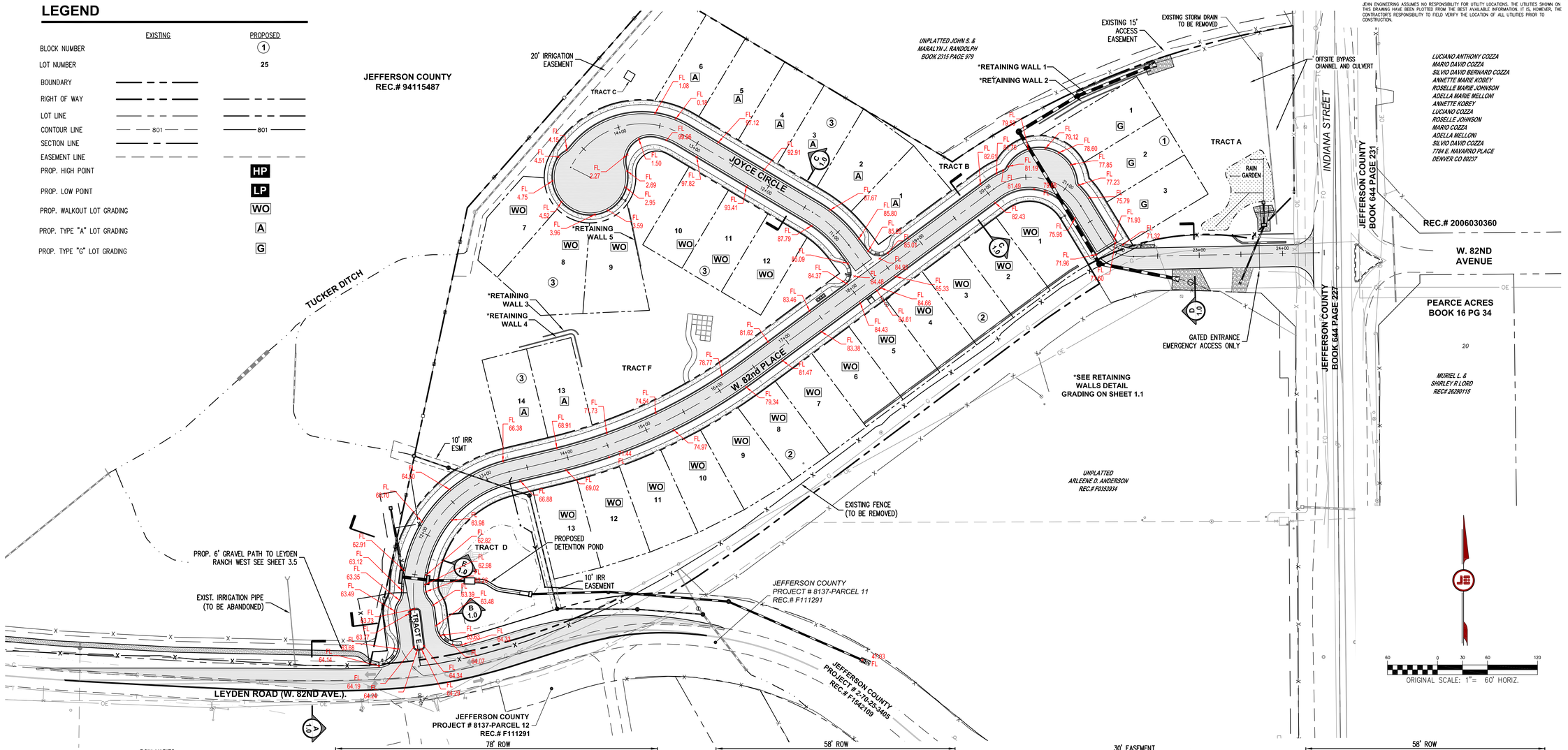
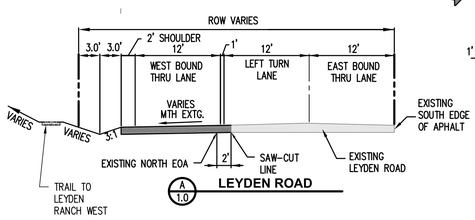
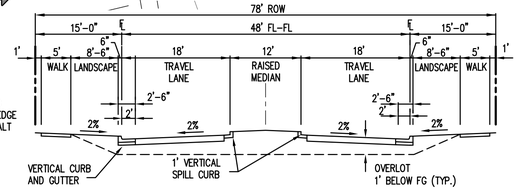
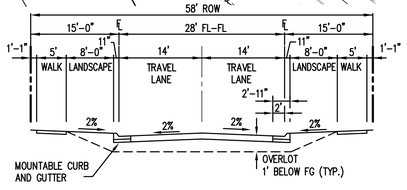




A 1.0 **LEYDEN ROAD**

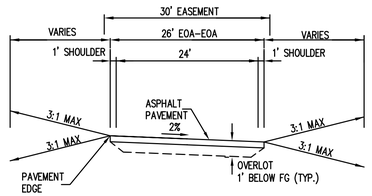


B 1.0 **ENTRANCE ROAD - EAST**
PARCEL

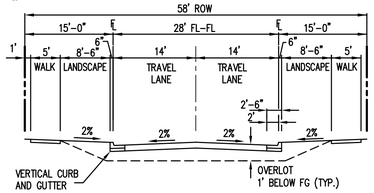


C 1.0 **LOCAL STREET**
MOUNTABLE CURB AND GUTTER

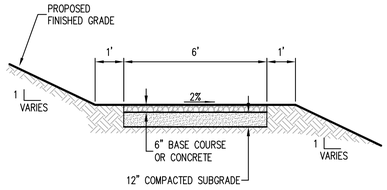
TYPICAL STREET SECTIONS



D 1.0 **EMERGENCY ACCESS ROAD**

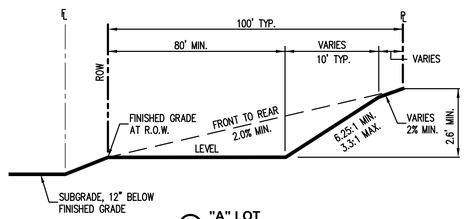


E 1.0 **LOCAL STREET**
VERTICAL CURB AND GUTTER

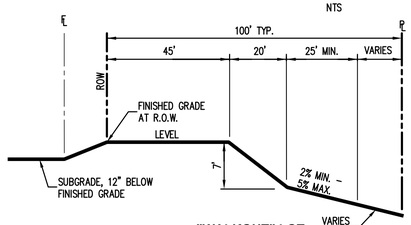


NOTES:
1. 6" BASE COURSE TO BE AASHTO BASE COURSE CLASS 5
2. 12" COMPACTED SUBGRADE.

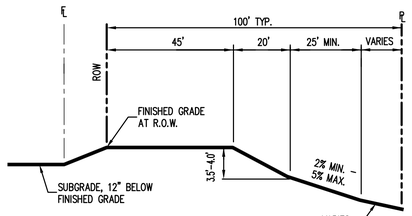
GRAVEL PATH TO LEYDEN RANCH WEST
NTS



A **"A" LOT**



WO **"WALKOUT" LOT**



G **"GARDEN" LOT**

TYPICAL OVERLOT TEMPLATES
NTS

ESTIMATED EARTHWORK

CUT =	34,241 CU YDS
FILL (UNADJUSTED SHRINKAGE) =	45,754 CU YDS
NET	11,513 CU YDS

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

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UTILITY NOTIFICATION CENTER
The Utility Notification Center
FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/18/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

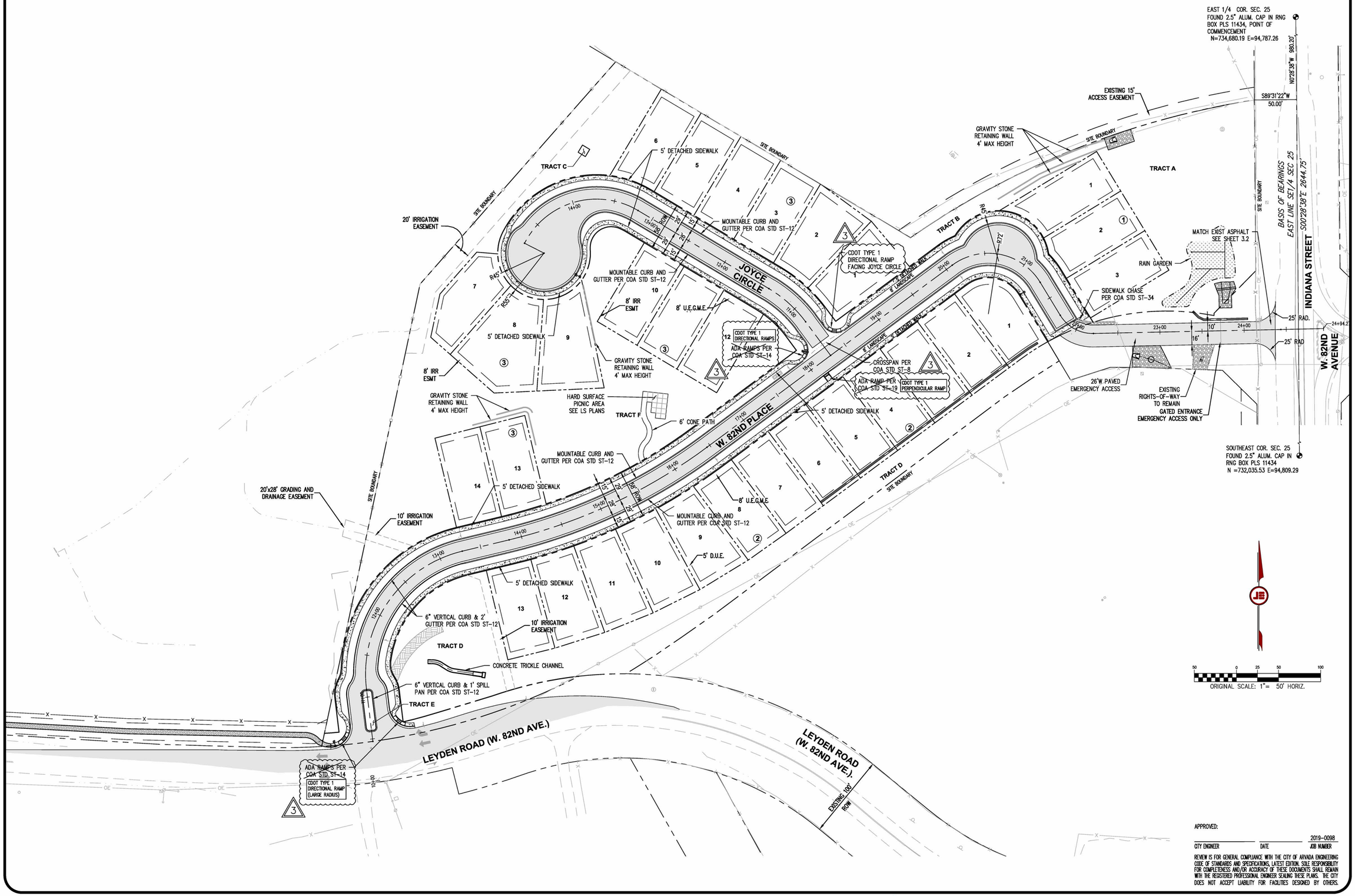
COLORADO REGISTERED JOSEPH A. JOHN 15756 PROFESSIONAL ENGINEER

JOHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN RANCH EAST
OVERALL GRADING PLAN
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
EJ	OKK	311-GR-01.dwg	

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 1.0 OF 30



APPROVED:

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3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

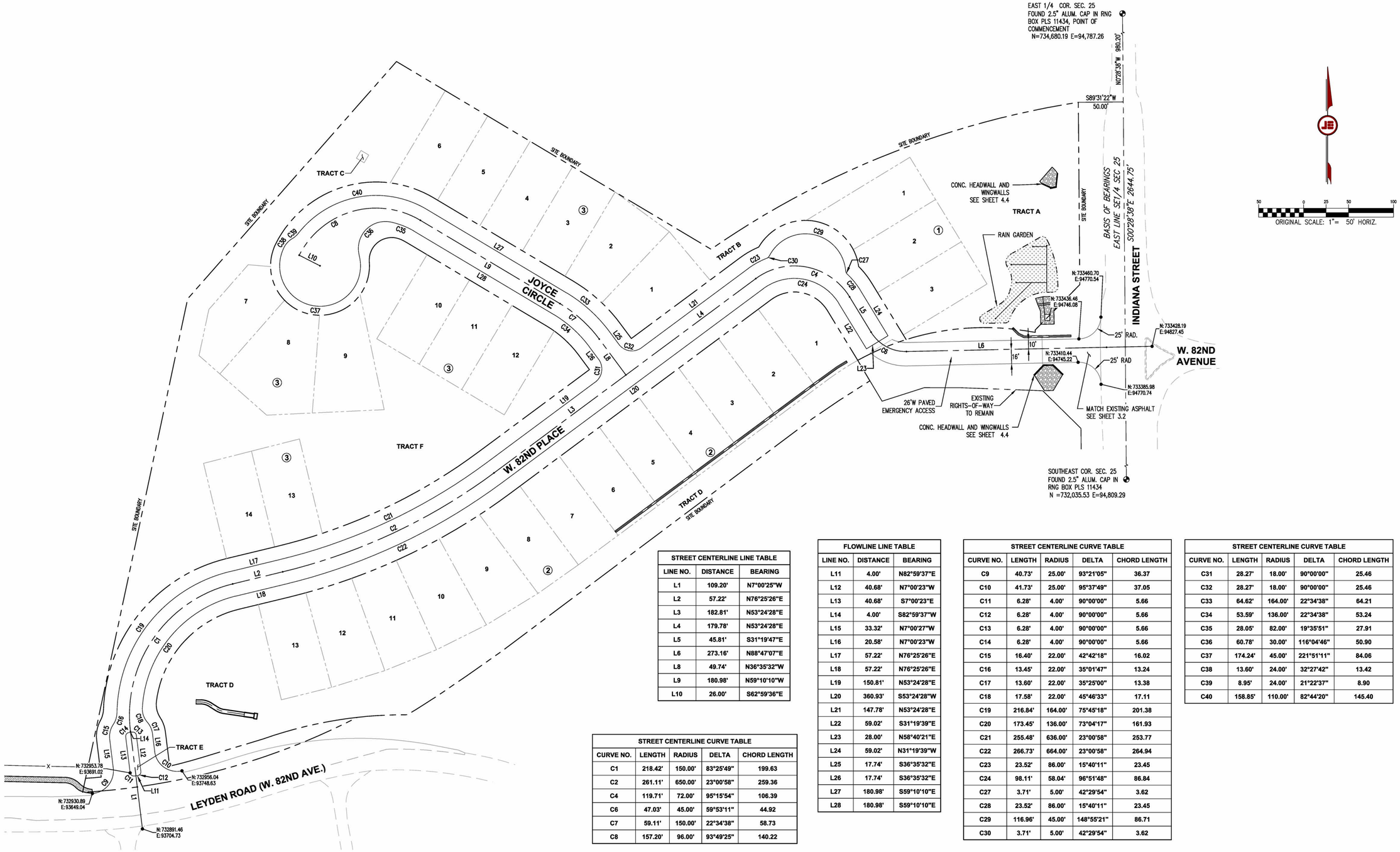
COLORADO LICENSED
JOSEPH A. JEHN
15756
08/04/2021
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-5438

LEYDEN RANCH EAST
SITE PLAN
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111SP.dwg
APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 2.2 OF 30



STREET CENTERLINE LINE TABLE		
LINE NO.	DISTANCE	BEARING
L1	109.20'	N7°00'25"W
L2	57.22'	N76°25'26"E
L3	182.81'	N53°24'28"E
L4	179.78'	N53°24'28"E
L5	45.81'	S31°19'47"E
L6	273.16'	N88°47'07"E
L8	49.74'	N36°35'32"W
L9	180.98'	N59°10'10"W
L10	26.00'	S62°59'36"E

FLOWLINE LINE TABLE		
LINE NO.	DISTANCE	BEARING
L11	4.00'	N82°59'37"E
L12	40.68'	N7°00'23"W
L13	40.68'	S7°00'23"E
L14	4.00'	S82°59'37"W
L15	33.32'	N7°00'27"W
L16	20.58'	N7°00'23"W
L17	57.22'	N76°25'26"E
L18	57.22'	N76°25'26"E
L19	150.81'	N53°24'28"E
L20	360.93'	S53°24'28"W
L21	147.78'	N53°24'28"E
L22	59.02'	S31°19'39"E
L23	28.00'	N58°40'21"E
L24	59.02'	N31°19'39"W
L25	17.74'	S36°35'32"E
L26	17.74'	S36°35'32"E
L27	180.98'	S59°10'10"E
L28	180.98'	S59°10'10"E

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C1	218.42'	150.00'	83°25'49"	199.63
C2	261.11'	650.00'	23°00'58"	259.36
C4	119.71'	72.00'	95°15'54"	106.39
C6	47.03'	45.00'	59°53'11"	44.92
C7	59.11'	150.00'	22°34'38"	58.73
C8	157.20'	96.00'	93°49'25"	140.22

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C9	40.73'	25.00'	93°21'05"	36.37
C10	41.73'	25.00'	95°37'49"	37.05
C11	6.28'	4.00'	90°00'00"	5.66
C12	6.28'	4.00'	90°00'00"	5.66
C13	6.28'	4.00'	90°00'00"	5.66
C14	6.28'	4.00'	90°00'00"	5.66
C15	16.40'	22.00'	42°42'18"	16.02
C16	13.45'	22.00'	35°01'47"	13.24
C17	13.60'	22.00'	35°25'00"	13.38
C18	17.58'	22.00'	45°46'33"	17.11
C19	216.84'	164.00'	75°45'18"	201.38
C20	173.45'	136.00'	73°04'17"	161.93
C21	255.48'	636.00'	23°00'58"	253.77
C22	266.73'	664.00'	23°00'58"	264.94
C23	23.52'	86.00'	15°40'11"	23.45
C24	98.11'	58.04'	96°51'48"	86.84
C27	3.71'	5.00'	42°29'54"	3.62
C28	23.52'	86.00'	15°40'11"	23.45
C29	116.96'	45.00'	148°55'21"	86.71
C30	3.71'	5.00'	42°29'54"	3.62

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C31	28.27'	18.00'	90°00'00"	25.46
C32	28.27'	18.00'	90°00'00"	25.46
C33	64.62'	164.00'	22°34'38"	64.21
C34	53.59'	136.00'	22°34'38"	53.24
C35	28.05'	82.00'	19°35'51"	27.91
C36	60.78'	30.00'	116°04'46"	50.90
C37	174.24'	45.00'	221°51'11"	84.06
C38	13.60'	24.00'	32°27'42"	13.42
C39	8.95'	24.00'	21°22'37"	8.90
C40	158.85'	110.00'	82°44'20"	145.40

APPROVED:

Jenny Wolfenbarger PE. 7/23/20 3363

CITY ENGINEER DATE JOB NUMBER

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RECORD DRAWING

C:\ECKS\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-HORZ_CTRL.dwg, 7/16/2020 11:02:59 AM

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4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

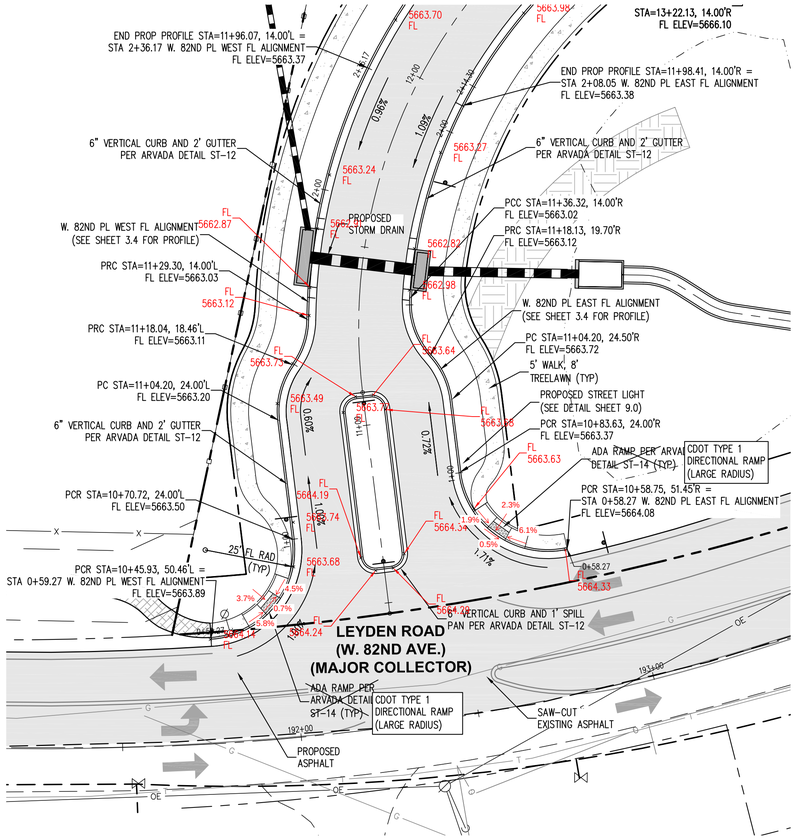
COLORADO REGISTERED JOSEPH A. HEHN 15756 PROFESSIONAL ENGINEER

JEHN ENGINEERING
8600 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-8038 FAX (303) 467-8438

LEYDEN RANCH EAST
HORIZONTAL CONTROL PLAN
prepared for
LEYDEN RANCH ES, LLC.

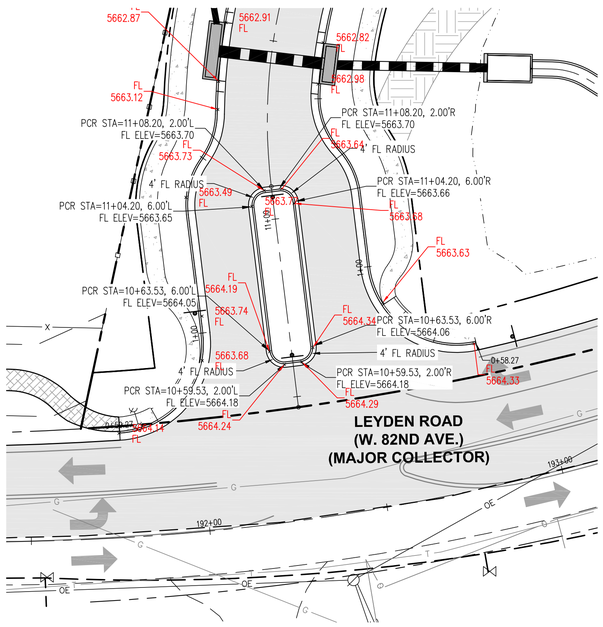
DRAWN BY: E
DESIGNED BY: O
DRAWING NAME: 3111-HORZ-CTRL.dwg
APPROVED BY:

JOB NUMBER: 201 -21 -111
DATE: 0 2020
SCALE: 1" 50
SHEET NO: 2. O 0



ENTRANCE DETAIL

SCALE: 1"=20'



MEDIAN DETAIL

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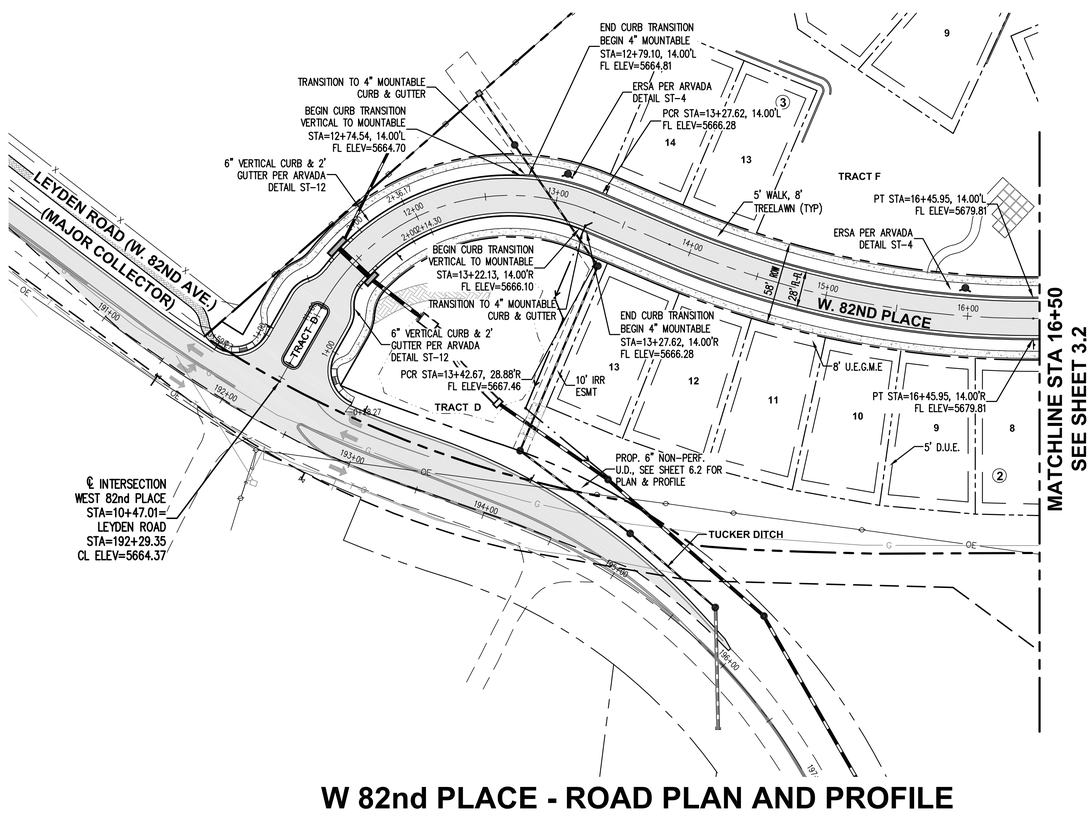
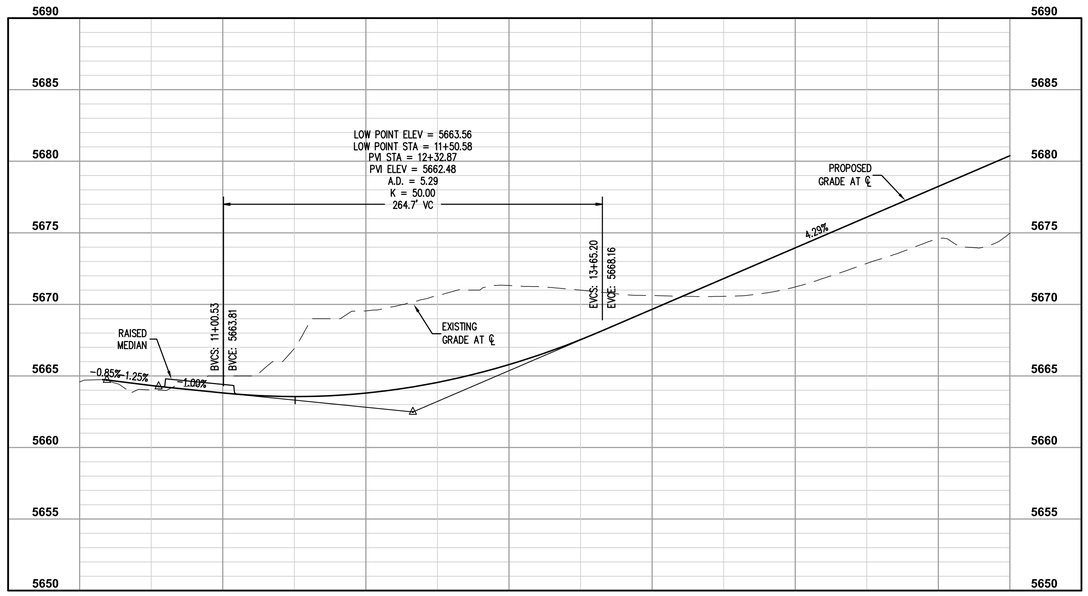


W 82nd PLACE - ROAD PLAN AND PROFILE



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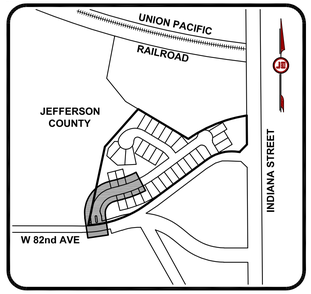
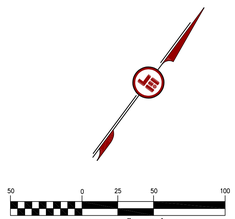


KEYMAP

SCALE 1"=500'



ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE HORIZONTAL CONTROL PLAN FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

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REVISIONS

NO.	DESCRIPTION	DATE	BY
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2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

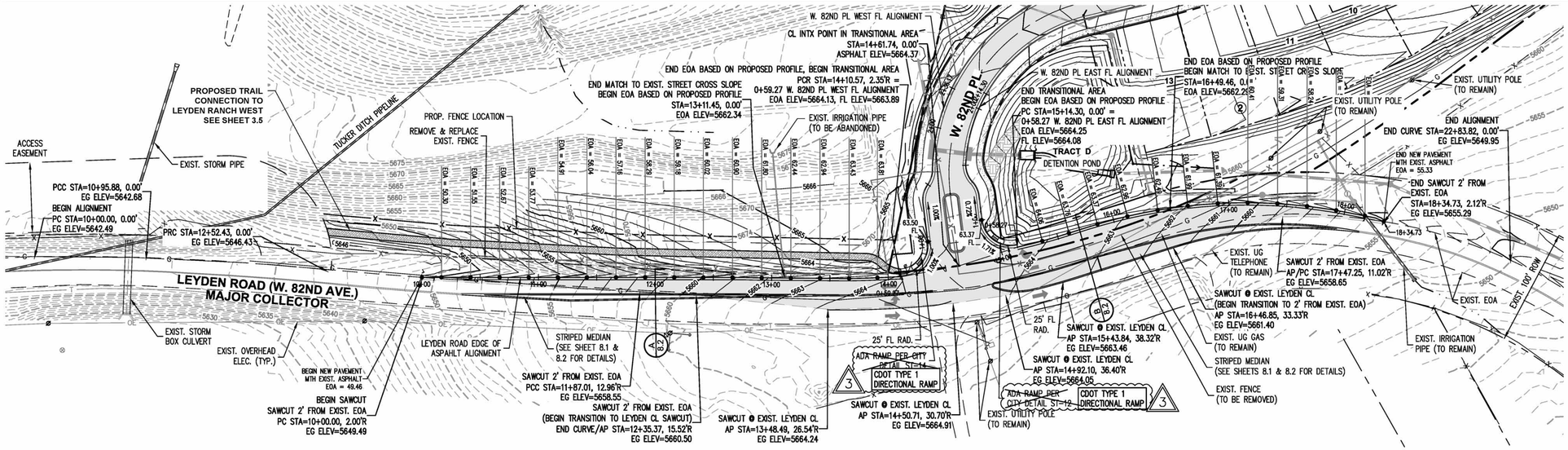
JEHN ENGINEERING
3680 WEBSTER STREET
DENVER, COLORADO 80211
PH: (303) 433-8038 FAX: (303) 467-9438

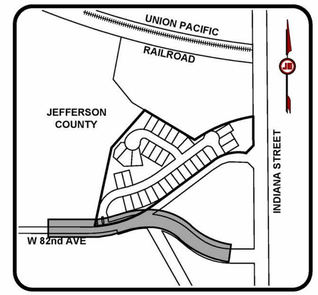
LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
WEST 82ND PLACE

prepared for:
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-82nd-PL.dwg
APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 3.1 OF 30

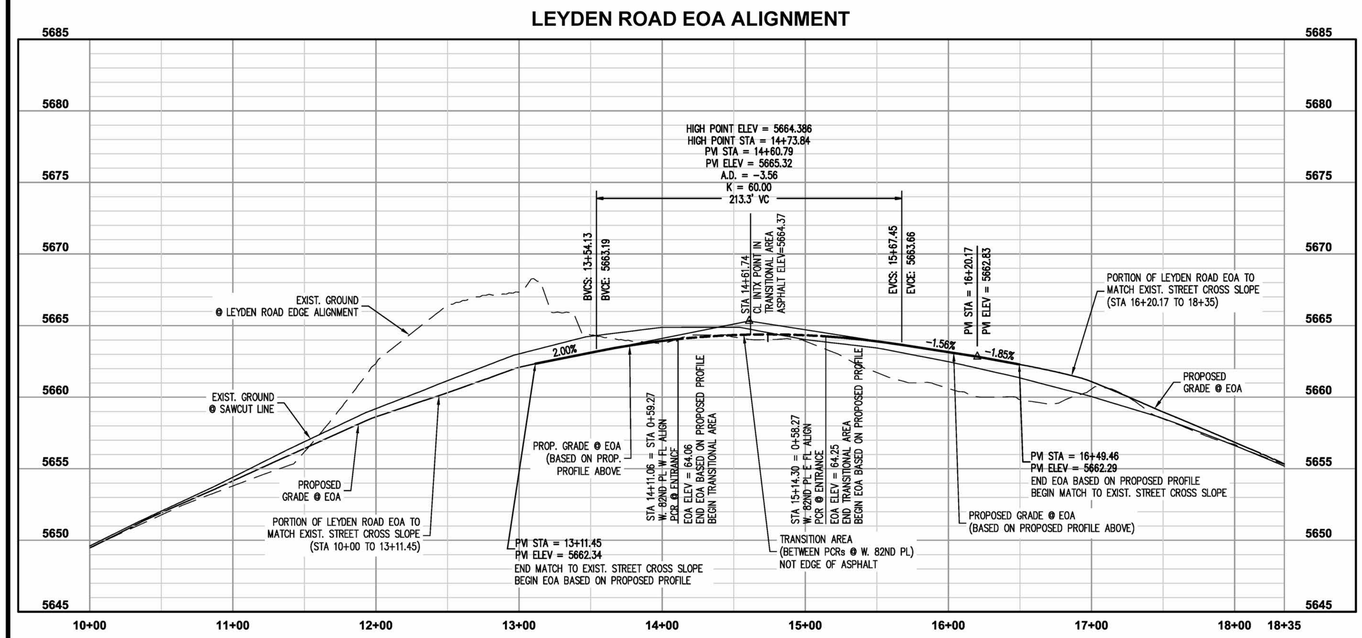




KEYMAP

SCALE 1"=500'

LEYDEN ROAD EOA ALIGNMENT



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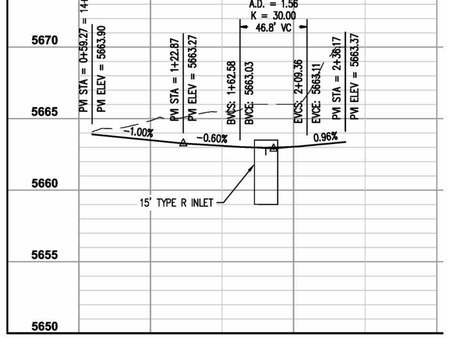
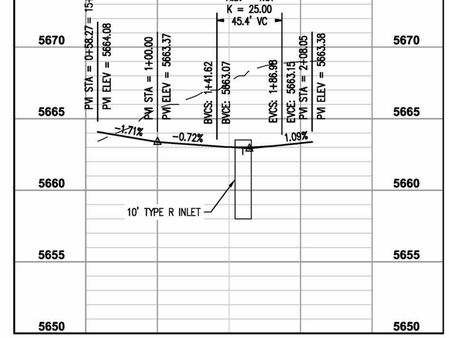
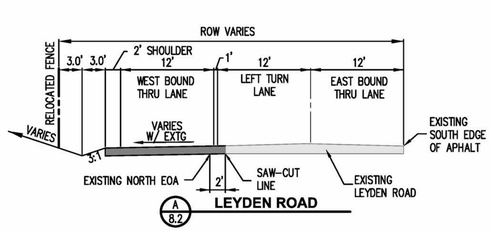


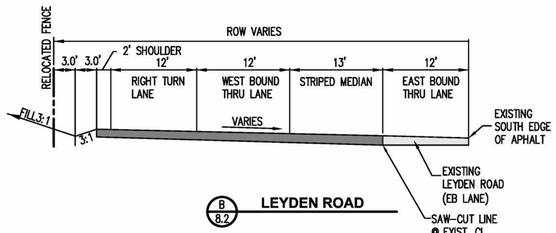
W. 82ND PL EAST FL ALIGNMENT

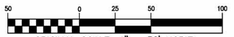


TYPICAL LEYDEN ROAD SECTIONS

NTS







ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

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NO	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/18/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

REVISIONS

COLORADO LICENSED — JOSEPH A. JEHN — 15756 — PROFESSIONAL ENGINEER — 08/04/2021

JEHN ENGINEERING
5660 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-8438

LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
LEYDEN ROAD IMPROVEMENTS
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-LEYDEN-RD.dwg
APPROVED BY:
JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 3.4 OF 30

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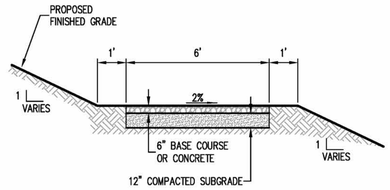
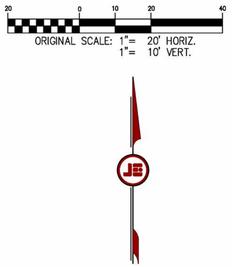


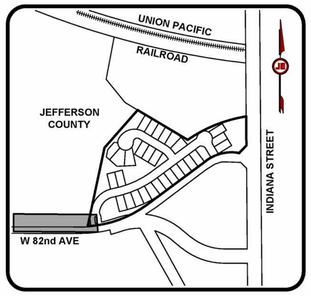
NOTES:

1. 6" BASE COURSE TO BE AASHTO BASE COURSE CLASS 5
2. 12" COMPACTED SUBGRADE.

TYPICAL SOFT TRAIL SECTION

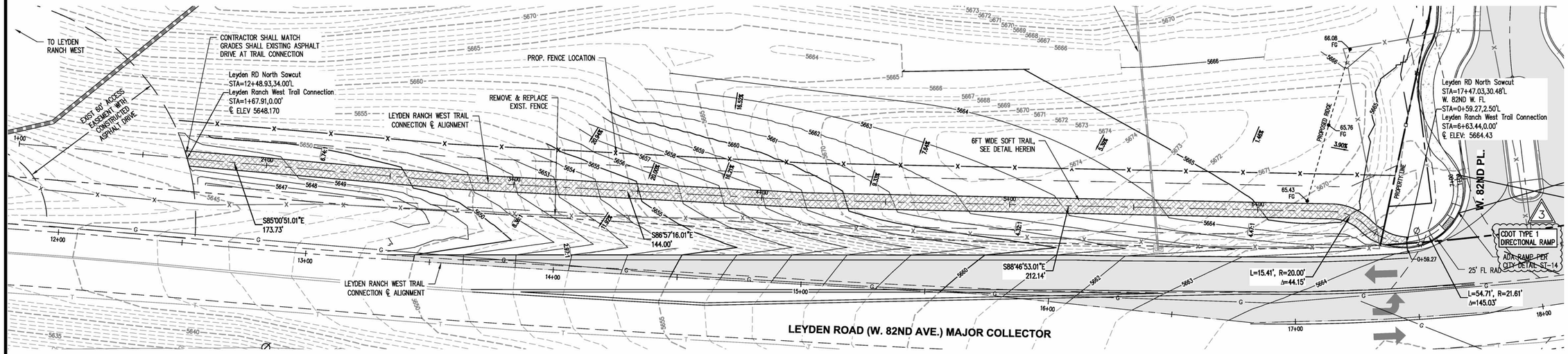
NTS



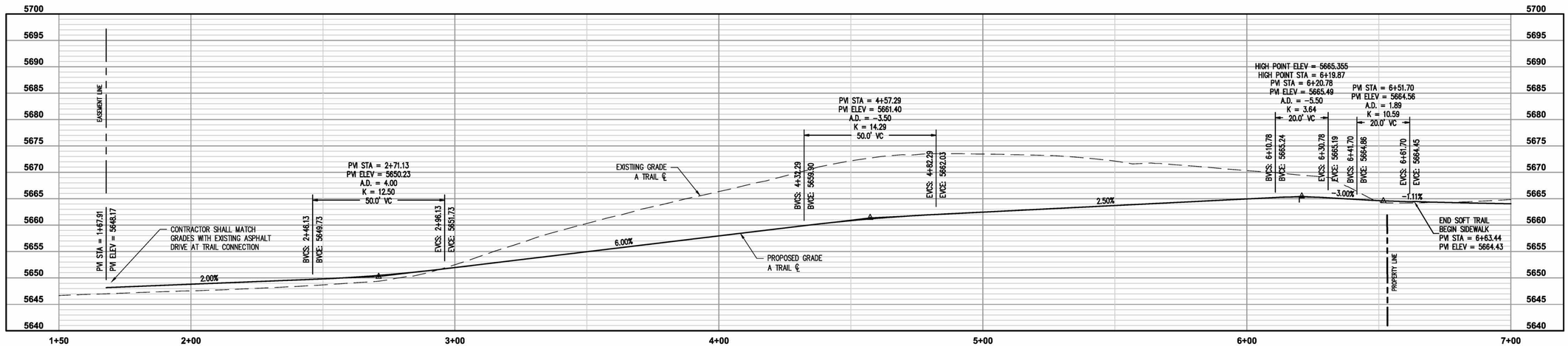


KEYMAP

SCALE 1"=500'



TRAIL CONNECTION TO LEYDEN RANCH EAST PLAN AND PROFILE



APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

UTILITY NOTIFICATION CENTER — The811.Promise.com

SCALE VERIFICATION
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FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

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NO	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/16/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

COLORADO LICENSED — JOSEPH A. HUNT — 15756 — 08/04/2021 — PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-8438

LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
WEST LEYDEN TRAIL CONNECTION

prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-LEYDENRD_Trail.dwg
APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 20'
SHEET NO: 3.5 OF 30

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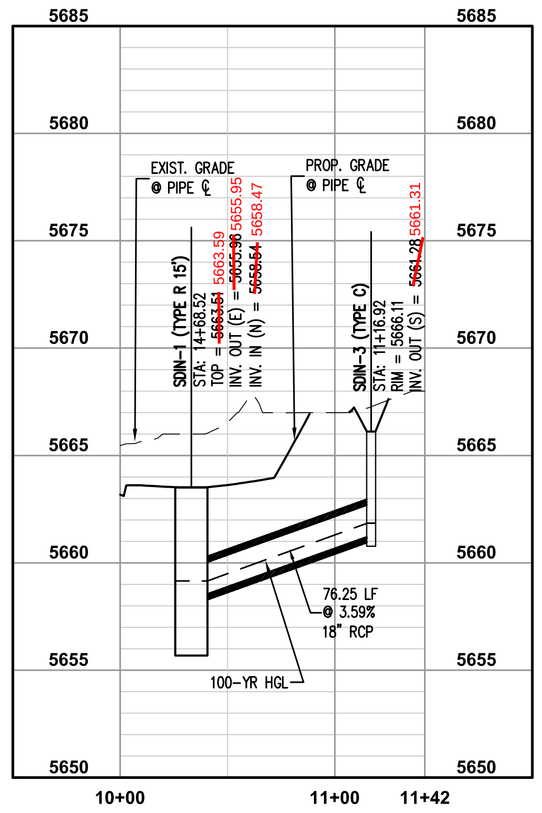
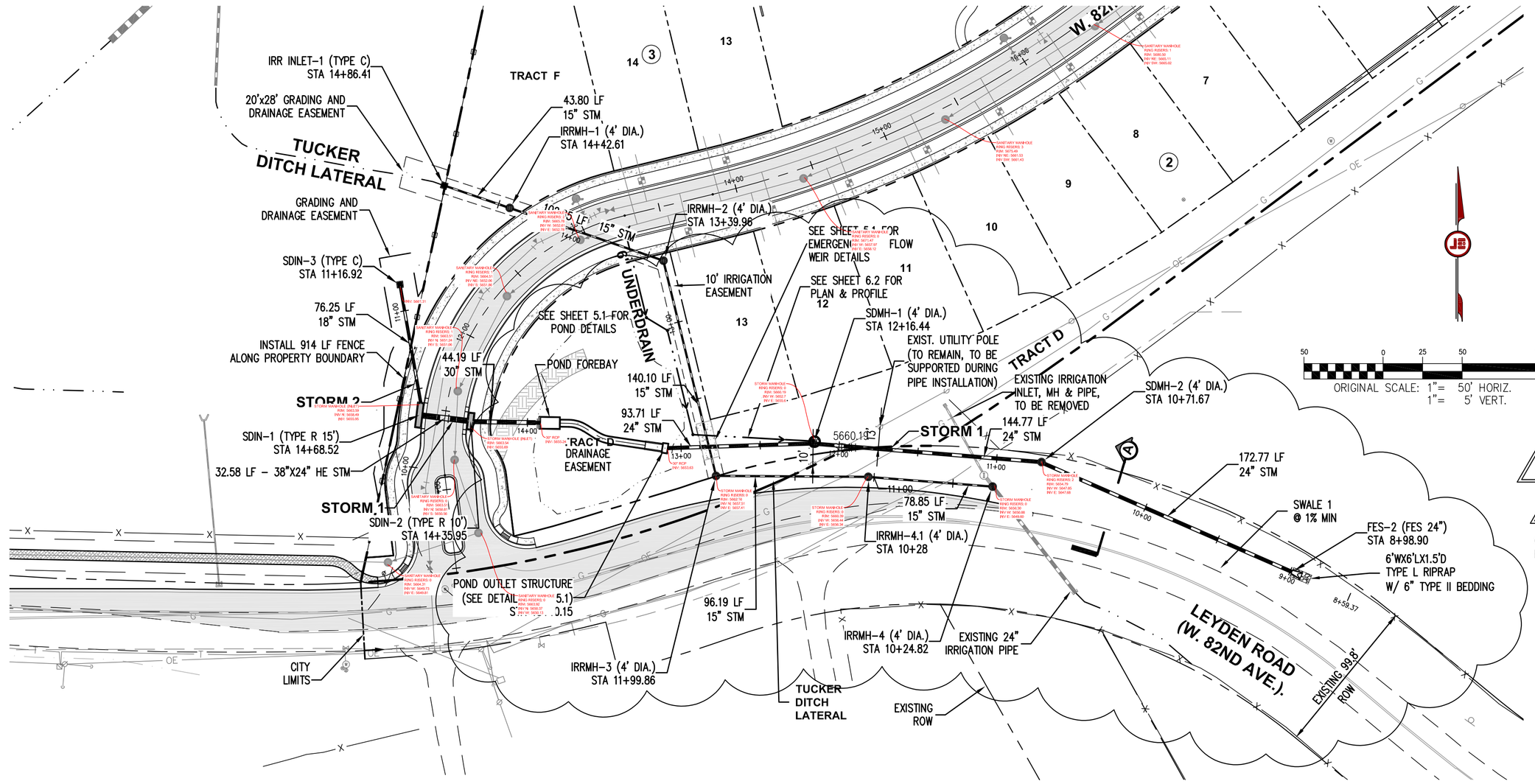
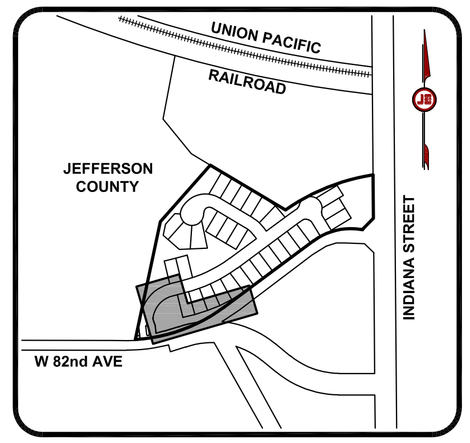


STORM 2 DRAIN PROFILE

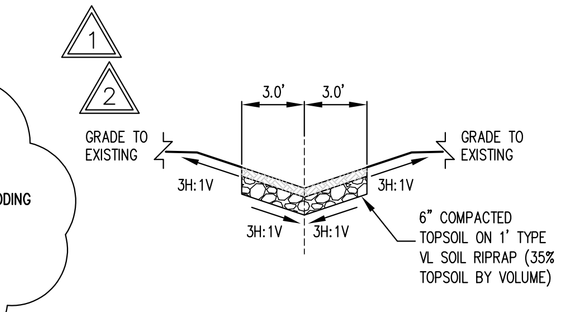


STORM AND TUCKER DITCH - PLAN & PROFILE



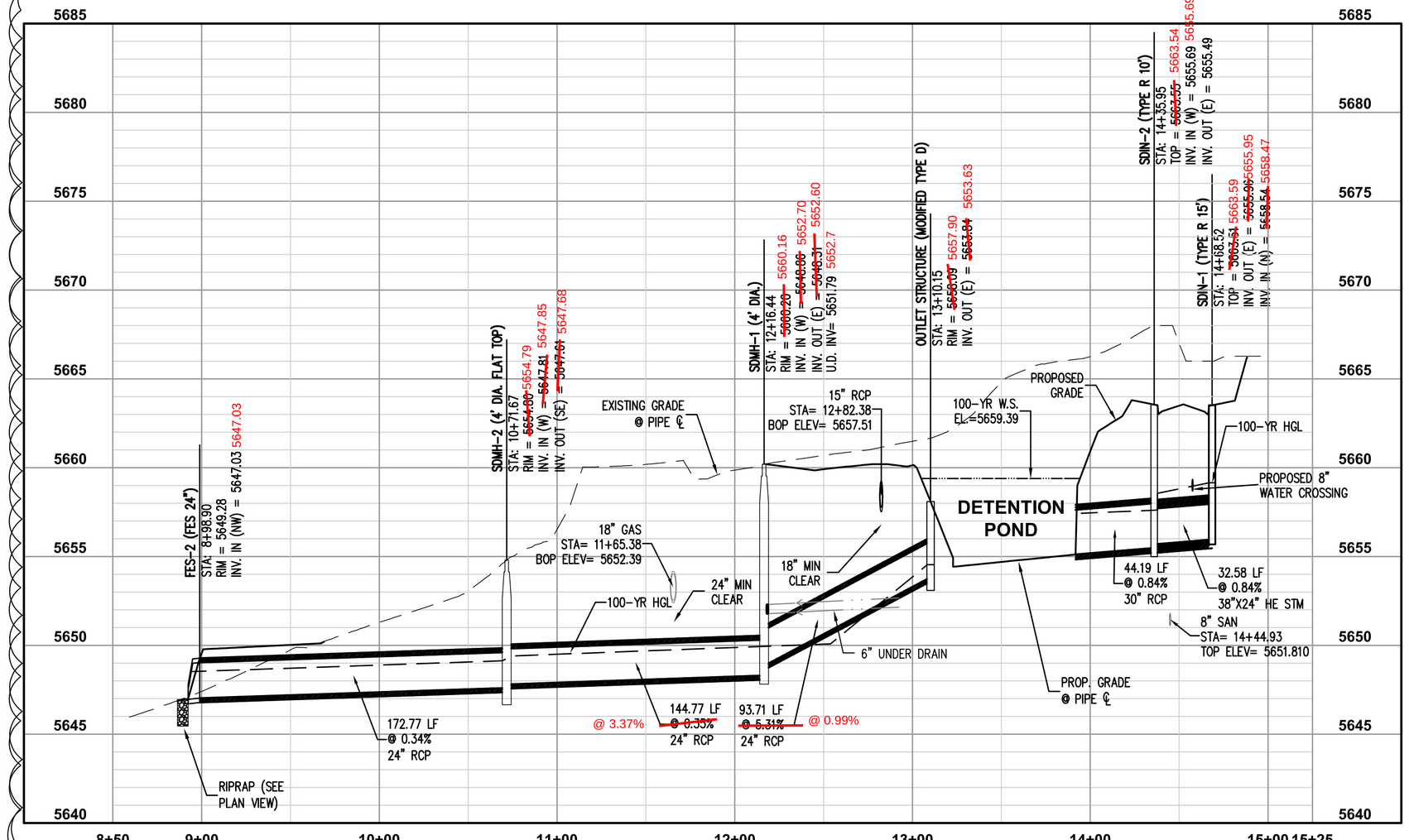
KEYMAP

SCALE 1"=500'

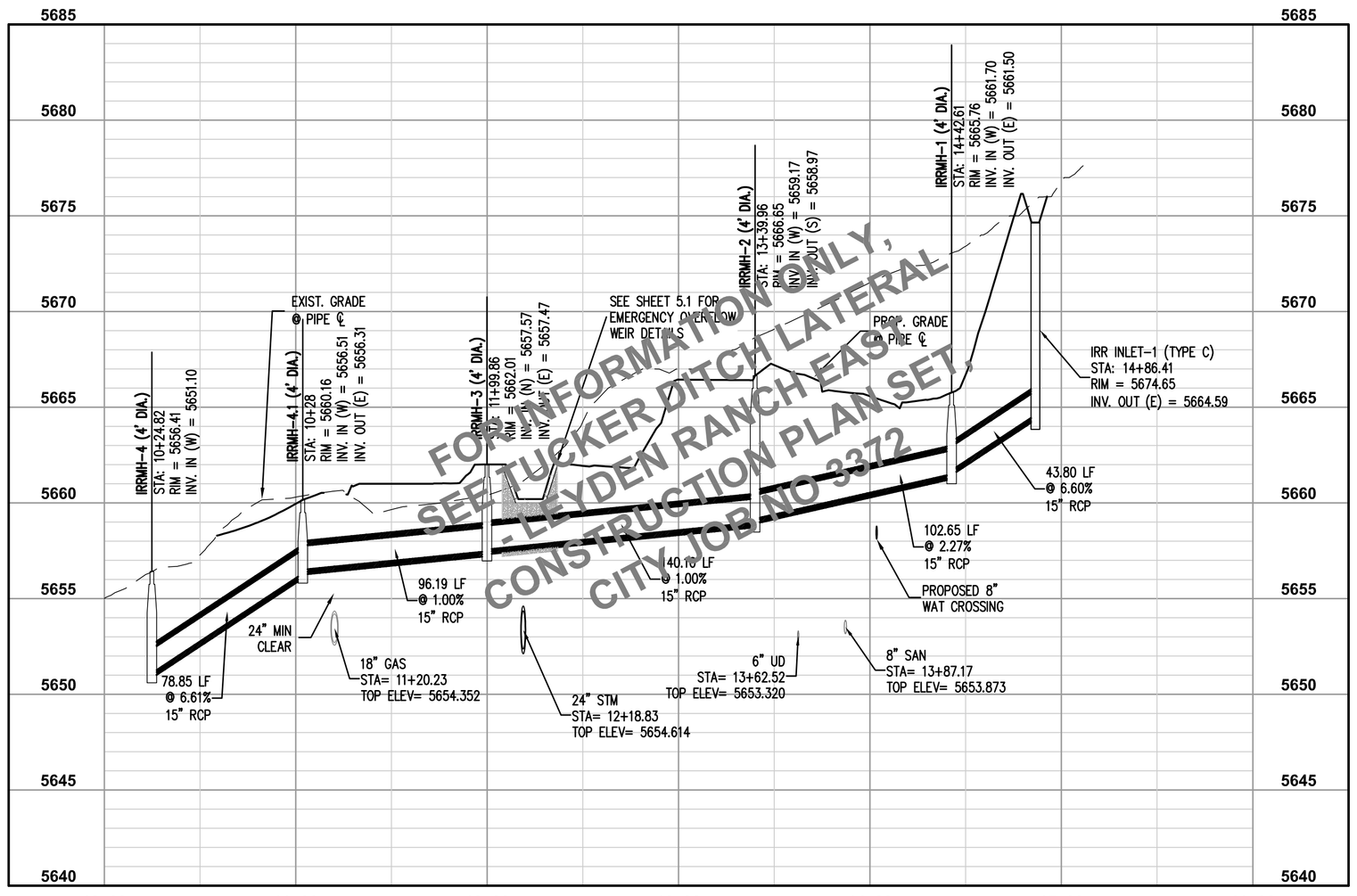


SECTION A-A

SWALE 1 TYPICAL SECTION



STORM 1 DRAIN PROFILE



FOR INFORMATIONAL ONLY, SEE TUCKER DITCH LATERAL - LEYDEN RANCH EAST CONSTRUCTION PLAN SET CITY JOB NO 3372

TUCKER DITCH PROFILE

RECORD DRAWING

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

UTILITY NOTIFICATION CENTER — The811.com — FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	3/23/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

REVISIONS

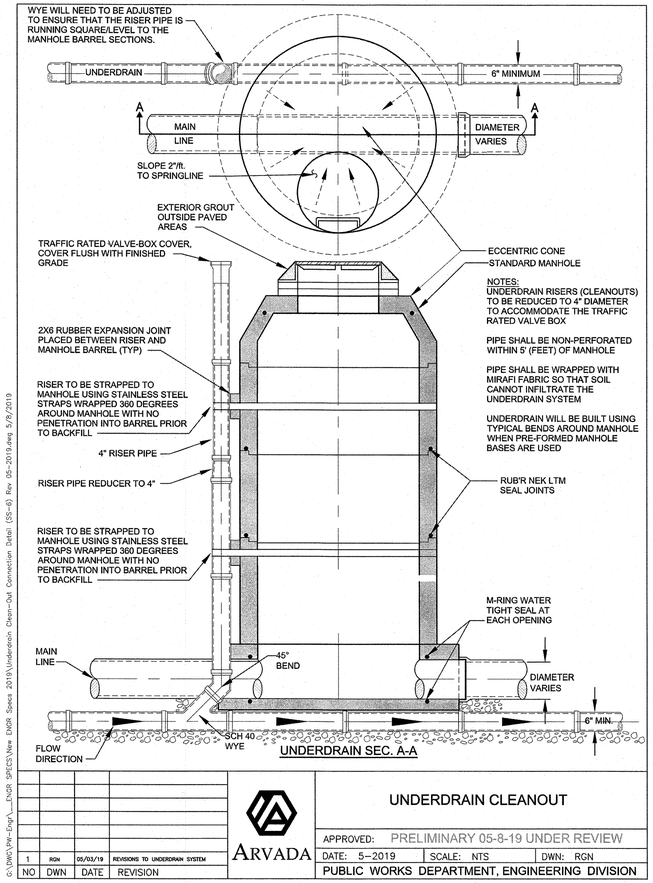
JEHN ENGINEERING
3600 WEBSTER STREET
DENVER, CO 80211
PH: (303) 422-8636 FAX: (303) 457-0438

LEYDEN RANCH EAST
STORM DRAIN AND IRRIGATION DRAIN - PLAN & PROFILE

prepared for: LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ | DESIGNED BY: OKK | DRAWING NAME: 311-STM-01.dwg | APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 4.1 OF 30



NO	DWN	DATE	REVISION
1	RGN	05/03/19	REVISIONS TO UNDERDRAIN SYSTEM

ARVADA

UNDERDRAIN CLEANOUT

APPROVED: PRELIMINARY 05-8-19 UNDER REVIEW

DATE: 5-2019 | SCALE: NTS | DWN: RGN

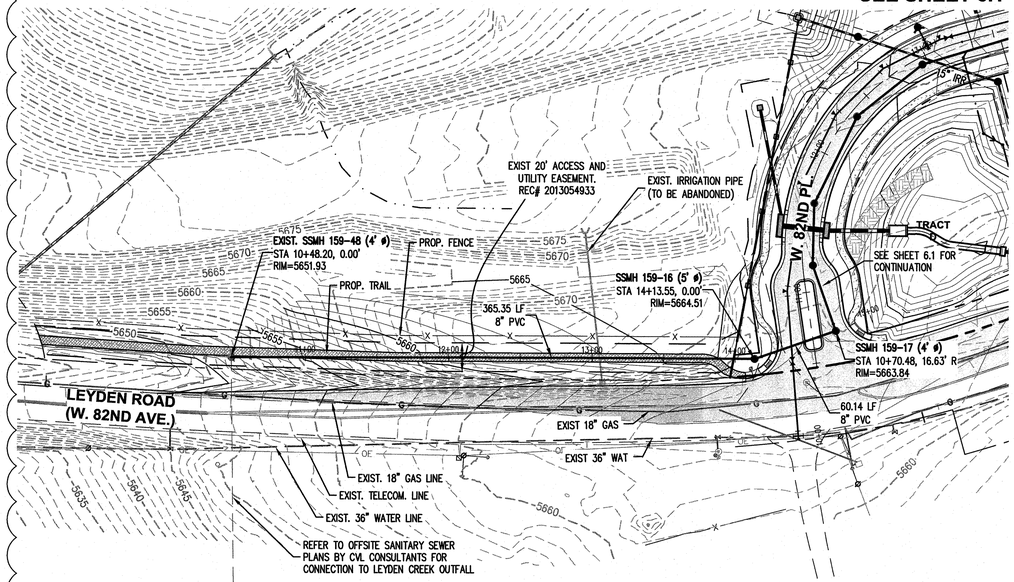
PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

SS-6

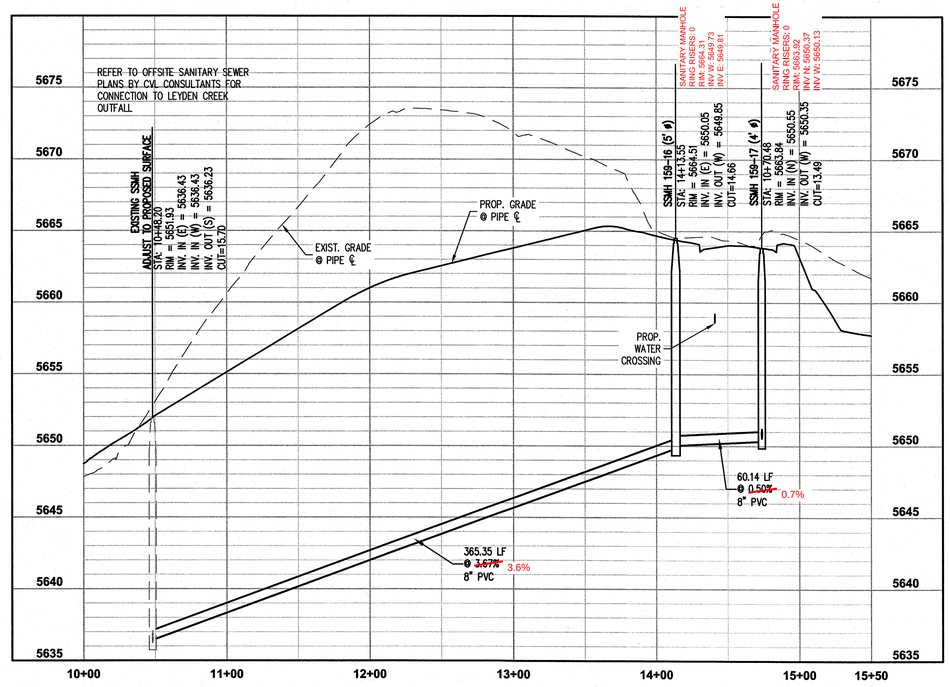
C:\DWG\Pw-Engr\...ENGR SPECS\New ENGR Specs 2019\Underdrain Clean-Out Connection Detail (SS-6) Rev 05-2019.dwg 5/8/2019

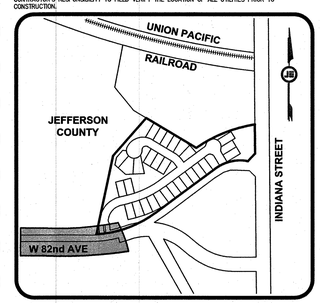
C:\KCK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-LEYDEN-RD-SAN.dwg, 2/18/2021 10:46:25 AM

SEE SHEET 6.1



W 82nd PLACE SANITARY SEWER - PLAN AND PROFILE





KEYMAP

SCALE 1"=500'

50 0 25 50 100

ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

1

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS OTHERWISE NOTED.
2. ALL SANITARY SEWER SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED:

CITY ENGINEER | DATE | 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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UTILITY NOTIFICATION CENTER — The Promise.com — FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

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REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	2/18/21	KEC

COLORADO REGISTERED JOSEPH A. JEHN 15756 PROFESSIONAL ENGINEER

JEHN ENGINEERING

3880 WEBSTER STREET ARVADA, CO 80002 PH: (303) 422-8336 FAX: (303) 467-8438

LEYDEN RANCH EAST

LEYDEN ROAD

prepared for LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ | DESIGNED BY: OKK | DRAWING NAME: 3111-LEYDEN-RD-SAN.dwg | APPROVED BY:

JOB NUMBER: 2016-213-111

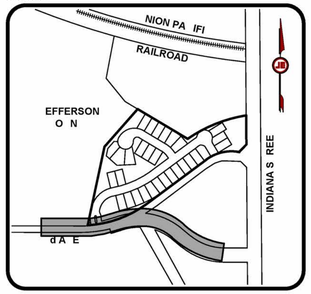
DATE: 04/9/2020

SCALE: 1" = 50'

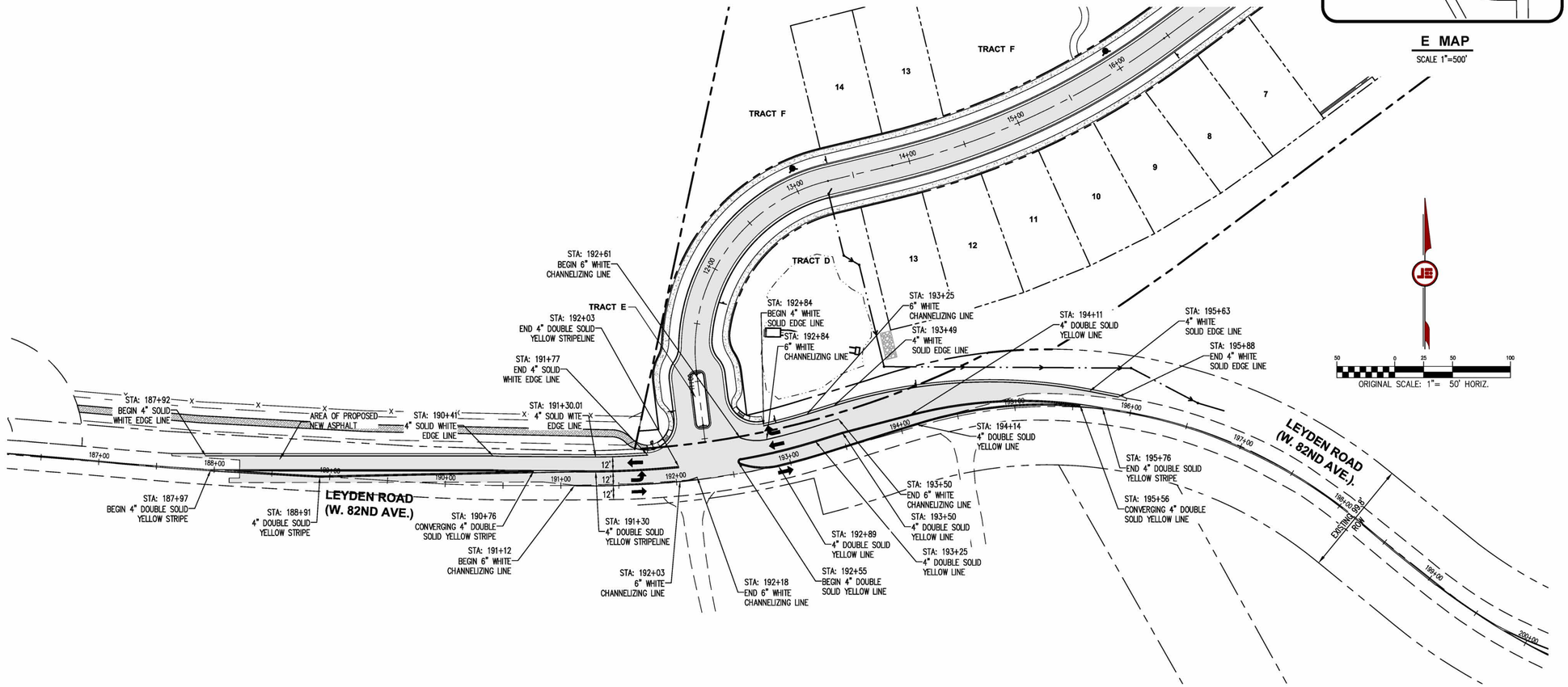
SHEET NO: 6.3 OF 30

RECORD DRAWING

JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



E MAP
SCALE 1"=500'



NO ES

1. POSTED SPEED LIMIT IS 40 MPH FOR W. 82ND AVENUE.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-3M TAPE, INLAID WITH OVERLAY.
4. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE WATER BASED PAINT. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
5. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA AND JEFFERSON COUNTY WHEN INSTALLING THE NEW STRIPING ON LEYDEN ROAD (W. 82ND AVE).
6. SEE SHEET 8.1 FOR LEYDEN ROAD (W. 82ND AVE.) SIGNAGE.

APPROVED:

Jenny Wolfenberg P.E.	7/23/20	3363	
CITY ENGINEER	DATE	JOB NUMBER	

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

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ILI NO ICA ION CEN ER
The811.Promise.com
FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

SCALE: ERI ICA ION
BAR IS ONE INCH
ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

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NO	DESCRI ION	DA E	B
1	REVISED PER CITY COMMENTS	3/4/15	BWV
2	REVISED PER CITY COMMENTS	4/29/15	MB
3	REVISED PER CITY COMMENTS	11/6/19	AHN
4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

RE ISIONS

COLORADO REGISTERED
JOSEPH A. HEN
15756
7/15/20
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8008 FAX: (303) 467-8408

LEYDEN RANCH EAST
LE DEN ROAD W 82ND
S RI IN LAN

prepared for
LE DEN RO ER IES, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
E	O	3111-TM-02.dwg	

JOB NUMBER: 201 -21 -111
DATE: 0 2020
SCALE: 1" 50
SHEET NO: 8.2 O 0

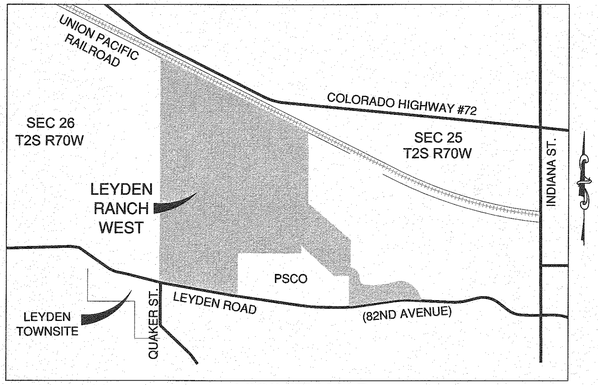
CONSTRUCTION PLANS

FOR

LEYDEN RANCH WEST SUBDIVISION

JEFFERSON COUNTY, CO

AS-BUILT



VICINITY MAP

SCALE 1" = 1000'

General Notes

A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION, UNLESS OTHERWISE SPECIFIED HEREIN.

B. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE LICENSED WITH THE CITY OF ARVADA ENGINEERING DIVISION.

C. ALL WORK WILL REQUIRE A CITY OF ARVADA ENGINEERING DIVISION PUBLIC IMPROVEMENT PERMIT PRIOR TO THE START OF CONSTRUCTION. ALL CONTRACTORS AND SUBCONTRACTORS MUST OBTAIN A SEPARATE PERMIT FOR THE WORK BEING COMPLETED BY THE PARTICULAR CONTRACTOR OR SUBCONTRACTOR. ANY CONSTRUCTION WITHIN THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) RIGHT-OF-WAY WILL REQUIRE A CDOT CONSTRUCTION PERMIT PRIOR TO ANY WORK IN THEIR RIGHT-OF-WAY.

D. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED DRAWINGS SIGNED BY THE CITY ENGINEER AND A PRINTED COPY OF THE CURRENT CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" ON SITE AT ALL TIMES.

E. THE CITY OF ARVADA ENGINEERING DIVISION SHALL BE NOTIFIED (PHONE # 720-898-7640) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

F. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.

G. THE CONTRACTOR IS RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY.

H. BENCHMARK LOCATION, ELEVATION AND DATUM ARE AS NOTED.

I. AS-BUILT DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD. UTILITY AS-BUILTS SHALL INCLUDE STATIONING OF ALL FITTINGS, SERVICES AND PERTINENT ELEVATIONS. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THE AS-BUILTS HAVE BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

J. A CITY OF ARVADA TAX CERTIFICATION FORM MUST BE COMPLETED BY ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT. THIS FORM DETAILS ALL MATERIALS WHICH HAVE BEEN INCLUDED IN THE WORK BY CONTRACTORS AND SUBCONTRACTORS. COPIES OF ALL PAID INVOICES FOR MATERIALS SHALL BE ATTACHED TO THE FORM. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THIS FORM HAS BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

K. OWNER/DEVELOPER SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A SITE OF ONE (1) ACRE OR MORE OR LESS THAN ONE ACRE AND PART OF A LAYER DEVELOPMENT. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF CLEARING, GRADING OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

L. CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR ALL AREAS WHERE DEWATERING IS REQUIRED FROM AN EXCAVATION AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

M. ALL CURB RAMPS SHALL COMPLY WITH THE LATEST CITY OF ARVADA AND ADA STANDARD. CONTRACTOR TO CHECK WITH THE CITY OF ARVADA ENGINEERING DIVISION TO VERIFY THE LATEST CURB RAMP STANDARD PRIOR TO CONSTRUCTION OF ANY RAMP.

N. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF ARVADA ENGINEERING DIVISION. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

O. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF ARVADA TRAFFIC ENGINEERING DIVISION FOR ACCEPTANCE WITH THE PUBLIC IMPROVEMENTS PERMIT APPLICATION. A PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL ON EXISTING ROADS DURING CONSTRUCTION.

95.7.2 STREET

A. CONTRACTOR SHALL HAVE ON SITE A COPY OF THE CITY OF ARVADA APPROVED SUBGRADE SOILS AND PAVEMENT DESIGN REPORT SHOWING MINIMUM REQUIRED SUBGRADE PREPARATION REQUIREMENTS AND MINIMUM REQUIRED PAVEMENT THICKNESSES.

B. ALL TRENCH BACKFILL AND SUBGRADE PREPARATION SHALL BE TESTED TO ENSURE COMPLIANCE WITH CITY OF ARVADA STANDARDS AND SHALL BE TESTED AT CITY REQUIRED FREQUENCIES BY A CITY APPROVED PRIVATE SOILS TESTING FIRM. TEST RESULTS SHALL BE SUBMITTED TO, REVIEWED, AND APPROVED BY, THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING BASE COURSE, ASPHALT OR CONCRETE ON PREPARED SUBGRADE. ALL BASE COURSE DENSITY SHALL ALSO BE TESTED BY THE PRIVATE SOILS FIRM AT CITY REQUIRED FREQUENCIES TO ENSURE COMPLIANCE WITH CITY OF ARVADA REQUIREMENTS. BASE COURSE TEST RESULTS SHALL ALSO BE APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING PAVEMENT. ALL CONCRETE AND ASPHALT PLACED SHALL BE TESTED IN ACCORDANCE WITH CITY OF ARVADA MINIMUM MATERIALS TESTING STANDARDS.TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD.

C. THE SUBGRADE MATERIAL SHALL BE REMOVED TO A DEPTH REQUIRED BY THE CITY OF ARVADA ACCORDING TO INFORMATION OBTAINED FROM LABORATORY TESTS AND/OR AS REQUIRED IN THE PAVEMENT DESIGN REPORT. ADDITIVES OR APPROVED MATERIAL MAY BE REQUIRED IF THE NATIVE MATERIAL IS UNSATISFACTORY. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY DETERMINED IN ACCORDANCE WITH AASHTO DESIGNATION T180 OR T99 AND IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS SECTION 203.07.

D. THE CONTRACTOR SHALL PROOF ROLL ALL SUBGRADE AND BASE COURSE IN A MANNER ACCEPTABLE TO THE CITY OF ARVADA IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". PROOF ROLLING SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO INSTALLATION OF PAVEMENT AND/OR CONCRETE FLATWORK.

E. ALL CONCRETE CURB, GUTTER, SIDEWALK AND OTHER FLATWORK WITHIN THE CITY RIGHT OF WAY SHALL BE MINIMUM 6" THICKNESS. CROSSPANS SHALL BE MINIMUM 8" THICKNESS AND MINIMUM 8 FOOT WIDTH. ALL CONCRETE SHALL BE MINIMUM 4000 PSI DESIGN STRENGTH REINFORCED WITH 1.5 LBS/CY FIBERMESH IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

95.7.3 IRRIGATION

A. CONTRACTOR IS TO NOTIFY AFFECTED IRRIGATION COMPANY A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION IN IRRIGATION EASEMENTS OR ON IRRIGATION DITCHES.

B. ALL IRRIGATION PIPE JOINTS SHALL BE WATERTIGHT AND PASS A LOW AIR PRESSURE TEST.

95.7.4 UTILITIES

A. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 24 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.

B. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER T & D DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.

C. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.

D. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.

E. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.

F. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

G. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.

H. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.

I. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION BY CALLING 720-898-7800.

CITY OF ARVADA STANDARD DETAILS

Surface Drainage
SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD14
SD-18
SD-19
SD-21
SD-22

STORM WATER
SW-1
SW-3
SW-4
SW-5
SW-6
SW-7
SW-8
SW-8a
SW-9
SW-9a
SW-10
SW-11

TRAFFIC
TR-1
TR-9

WATER
W-1
W-3
W-4
W-6
W-7
W-8
W-9
W-10
W-11
W-12
W-13
W-14
W-15
W-16
W-17
W-18
W-19
W-20
W-21
W-22

WATER
W-30
W-47
W-48
W-49
W-50
W-51
W-52
W-54
W-55
W-56
W-57
W-58
W-59
W-65

STREETS
ST-4
ST-10
ST-11
ST-12
ST-17

WATER METERS
W-31
W-32
W-33
W-34
W-35
W-36
W-37
W-44
W-45

SANITARY
SS-1
SS-2
SS-3
SS-4
SS-5
SS-7
SS-13

AB = AS-BUILT SHEETS INCLUDED IN THIS SET

SHEET INDEX

Sheet Number	Sheet Title	Sheet Number	Sheet Title
AB 0.0	**0.0 COVER SHEET**	AB 4.7	**(POPPY LOOP) SANITARY SEWER PLAN AND PROFILE**
1.0	OVERALL OVERLOT GRADING PLAN	AB 4.8	**(POPPY STREET) SANITARY SEWER PLAN AND PROFILE**
1.1	OVERLOT GRADING PLAN	AB 4.9	**W. (84TH LOOP) SANITARY SEWER PLAN AND PROFILE**
1.2	OVERLOT GRADING PLAN	AB 4.10	**(ORCHARD WAY) SANITARY SEWER PLAN AND PROFILE**
1.3	OVERLOT GRADING PLAN	AB 4.11	**(NOBLE COURT) SANITARY SEWER PLAN AND PROFILE**
1.4	OVERLOT GRADING PLAN	AB 4.12	**(WEST 83RD PLACE) SANITARY SEWER PLAN AND PROFILE**
1.5	OVERLOT GRADING PLAN	AB 4.13	**(MOSS CIRCLE) SANITARY SEWER PLAN AND PROFILE**
1.6	OVERLOT GRADING PLAN	AB 4.14	**(EMERGENCY ACCESS ROAD) SANITARY SEWER PLAN AND PROFILE**
1.7	OVERLOT GRADING PLAN	AB 5.0	**POND A**
1.8	OVERLOT GRADING PLAN - TRAILS	AB 5.1	**POND A DETAILS**
1.9	JEFFERSON COUNTY POND	AB 5.2	**POND B DESIGN**
1.10	BORROW PLAN	AB 5.3	**POND C DESIGN**
AB 2.0	**OVERALL UTILITY PLAN**	5.4	OFFSITE POND E STORM OUTFALL
3.0	WEST 84TH LANE ROADWAY DESIGN 10+00 TO 21+55	5.5	POND E OUTFALL
3.1	WEST 84TH DRIVE ROADWAY DESIGN 21+55 TO 33+10	AB 6.0	**WEST 84TH LANE STORM SEWER PLAN AND PROFILE**
3.2	WEST 84TH DRIVE ROADWAY DESIGN 33+10 TO 44+65	AB 6.1	**WEST 84TH DRIVE STORM SEWER PLAN AND PROFILE**
3.3	WEST 84TH LANE ROADWAY DESIGN 44+65 TO 48+58	AB 6.2	**ORCHARD WAY STORM SEWER PLAN AND PROFILE**
3.4	WEST 85TH DRIVE ROADWAY DESIGN	AB 6.3	**ORION WAY STORM SEWER PLAN AND PROFILE**
3.5	POPPY LOOP ROADWAY DESIGN	AB 6.4	**ORION WAY STORM 21+00 - 23+00**
3.6	POPPY STREET ROADWAY DESIGN	AB 6.5	**MOSS CIRCLE STORM 9+50 - 16+00**
3.7	W. 84TH LOOP ROADWAY DESIGN	AB 6.6	**EMERGENCY ACCESS ROAD STORM DRAIN 18+00 - 26+00**
3.8	ORCHARD WAY ROADWAY DESIGN	AB 6.7	**EMERGENCY ACCESS ROAD STORM OUTFALL 26+00 - 28+78**
3.9	ORION WAY ROADWAY DESIGN 10+00 TO 16+50	AB 7.0	**(WEST 85TH DRIVE) WATERLINE PLAN & PROFILE**
3.10	ORION WAY ROADWAY DESIGN 16+50 TO 27+50	AB 7.1	**(WEST 84TH LANE) WATERLINE P&P STA 10+00 TO 21+55**
3.11	ORION WAY ROADWAY DESIGN 27+50 TO 34+50	AB 7.2	**(WEST 84TH DRIVE) WATERLINE P&P STA 21+55 TO 33+10**
3.12	NOBLE COURT ROADWAY DESIGN	AB 7.3	**(WEST 84TH DRIVE) WATERLINE P&P STA 33+10 TO 44+65**
3.13	WEST 83RD AVE. & PLACE ROADWAY DESIGN	AB 7.4	**(WEST 84TH LANE) WATERLINE P&P STA 44+65 TO 48+58.37**
3.14	MOSS CIRCLE ROADWAY DESIGN 10+00 TO 21+00	AB 7.5	**(POPPY LOOP) WATERLINE PLAN AND PROFILE**
3.15	EMERGENCY ACCESS ROAD DESIGN 21+00 TO 30+50	AB 7.6	**(POPPY STREET) WATERLINE PLAN AND PROFILE**
3.16	WEST 84TH PLACE ROADWAY DESIGN	AB 7.7	**(84TH LOOP) WATERLINE PLAN AND PROFILE**
3.17	LEYDEN ROAD	AB 7.8	**(ORCHARD WAY) WATERLINE PLAN AND PROFILE**
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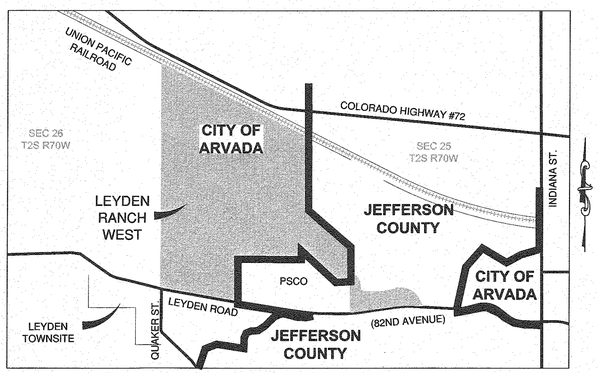
AB 4.1	**LEYDEN ROCK SANITARY SEWER OUTFALL**	AB 7.10	**(WEST 83RD PLACE) WATERLINE PLAN AND PROFILE**
AB 4.2	**(WEST 84TH LANE) SANITARY SEWER 10+00 TO 21+55**	AB 7.11	**(MOSS CIRCLE) WATERLINE PLAN AND PROFILE**
AB 4.3	**(WEST 84TH DRIVE) SANITARY SEWER P&P 21+55 TO 33+30**	8.1	SIGNAGE AND STRIPING PLAN
AB 4.4	**(WEST 84TH DRIVE) SANITARY SEWER P&P 33+30 TO 44+65**	8.2	SIGNAGE AND STRIPING PLAN
AB 4.5	**(WEST 84TH LANE) SANITARY SEWER 44+65 TO 48+58.37**	9.0	DETAILS
AB 4.6	**(WEST 85TH DRIVE) SANITARY SEWER P&P**		

→ 5.0B LOWER POND A OUTFALL AB

→ 8.2A LEYDEN ROAD INTERIM SIGNAGE AND STRIPING PLAN



JURISDICTIONAL BOUNDARY MAP

SCALE 1" = 1000'

PROJECT CONTACTS
OWNER/DEVELOPER:
TAYLOR MORRISON
1420 W. CANAL COURT, SUITE 170
LITTLETON, CO 80120

CIVIL ENGINEERS:
CVL CONSULTANTS
10333 E. DRY CREEK SUITE 240
ENGLEWOOD CO 80112
(720) 482-9526

PLANNER
PCS GROUP
#3, B-180 INDEPENDENCE PLAZA
1007 16TH STREET
DENVER, CO 80265
(303) 531-4905

CITY OF ARVADA
ENGINEERING DEPARTMENT
(720) 898-7640

JEFFERSON COUNTY
TRANSPORTATION ENGINEERING DEPARTMENT
(303) 271-8485

ARVADA FIRE PROTECTION DISTRICT
(303) 424-3012

PROJECT BENCHMARK: EAST ¼ CORNER SECTION 25, T. 2 S., R. 70 W., 6TH PM, A 2 ½" ALUMINUM CAP IN A RANGE BOX LS 28286 DATED 2006. ELEVATION = 5717.92 CITY OF ARVADA.

PROJECT DATUM: CITY OF ARVADA ELEVATION = NAVD 88 - 2.5'

BASIS OF BEARING: BEARINGS ARE BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, JEFFERSON COUNTY, COLORADO AS BEING MONUMENTED AT THE EAST QUARTER CORNER WITH A 3.25" A.C. LS 11434 1999 AND AT THE SOUTHEAST CORNER WITH A PK NAIL WITH REFERENCE TIES BEARING SOUTH 00°28'44" EAST A DISTANCE OF 2644.57 FEET.

COLORADO LICENSED 35693 PROFESSIONAL ENGINEER 8-3-13

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
1-800-922-1987
UNCC UTILITY NOTIFICATION CENTER OF COLORADO

CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	UTILITY CONFLICTS RESOLVED	11/6/13	ILG		
3	REVISED SDMH RIM ELEVATIONS	6/2/14	MJP		
2	REMOVE WALLS ON ORION WAY	8/19/13	SJK		
1	REVISE SHT 6.7 PER TUCKER DITCH	8/19/13	SJK		

CVL CONSULTANTS
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

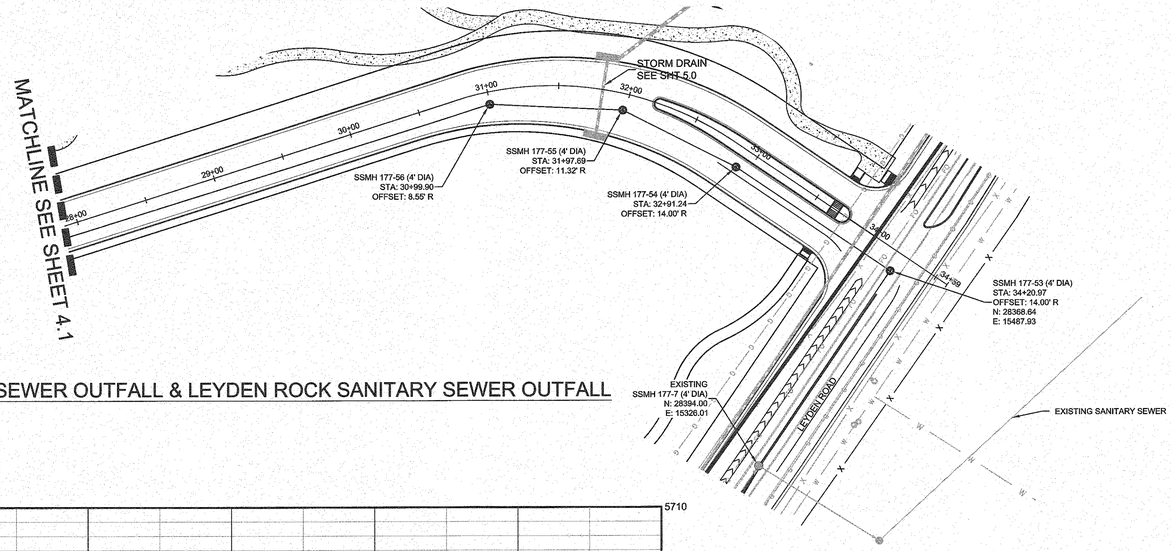
Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

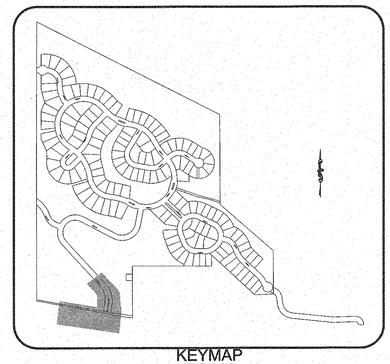
LEYDEN RANCH WEST
Arvada, Colorado
COVER SHEET

SCALE: AS SHOWN
DRAWN BY: SL
CHECKED BY: SJK
DATE: 5/31/2013
FILE NO: 30131801

SHEET NUMBER 0.0

0.0 COVER SHEET AS-BUILT.dwg





PLAN: (ORION WAY) SANITARY SEWER OUTFALL & LEYDEN ROCK SANITARY SEWER OUTFALL

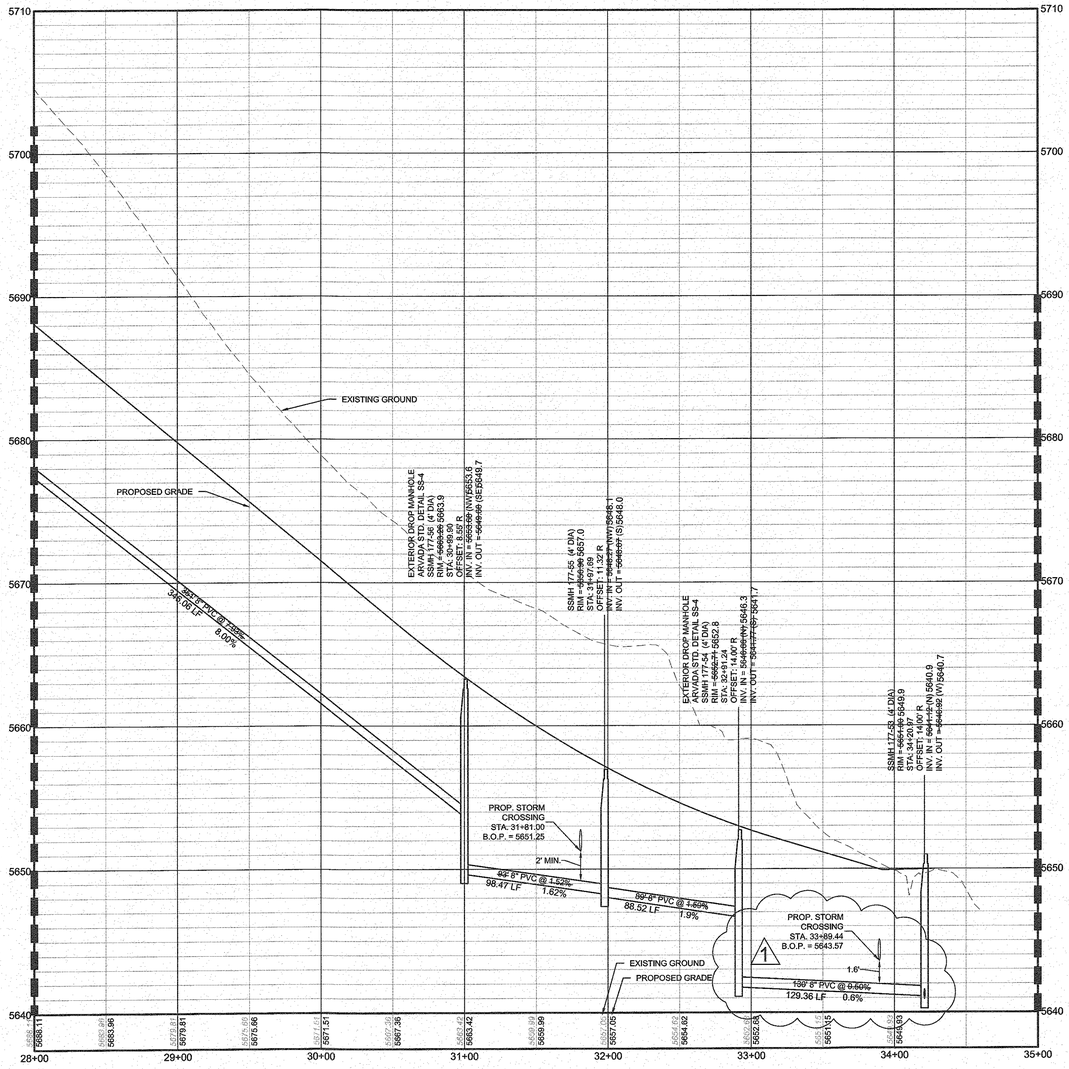
HORIZONTAL SCALE: 1" = 50'

AS-BUILT

50 25 0 50 100

SCALE: 1" = 50'

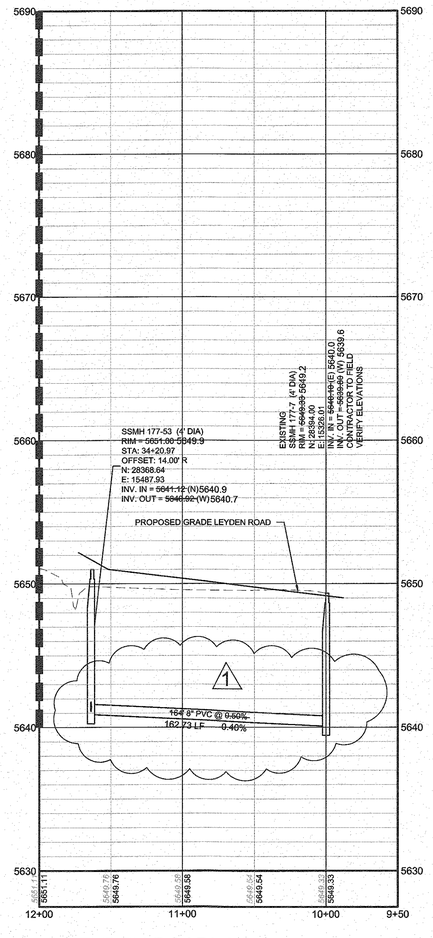
LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED LOW POINT BLOW-OFF
	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE



PROFILE: (ORION WAY) SANITARY SEWER OUTFALL

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

MATCHLINE SEE THIS SHEET



PROFILE: (LEYDEN ROAD) SANITARY SEWER OUTFALL

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

COLORADO LICENSED PROFESSIONAL ENGINEER 35693 8-3-15 PROFESSIONAL ENGINEER

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

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UNCC UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987

CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

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1	REVISED LEYDEN WEST CROSSING	8/19/13	SJK		
		6/2/14	MJP		

10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

CVL CONSULTANTS

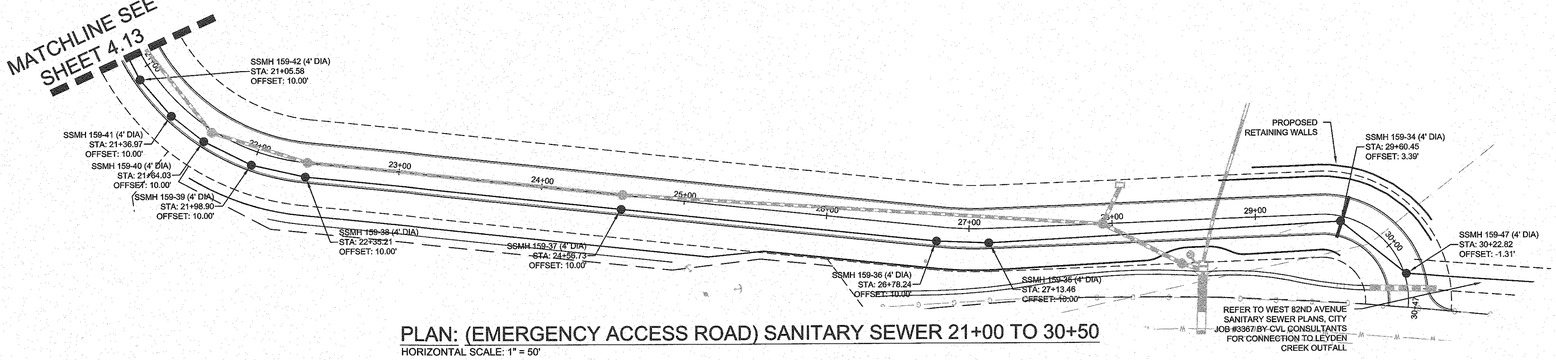
Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
LEYDEN ROCK SANITARY SEWER OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: ORION WAY/A
CHECKED BY: SJK
DATE: 5/31/2013

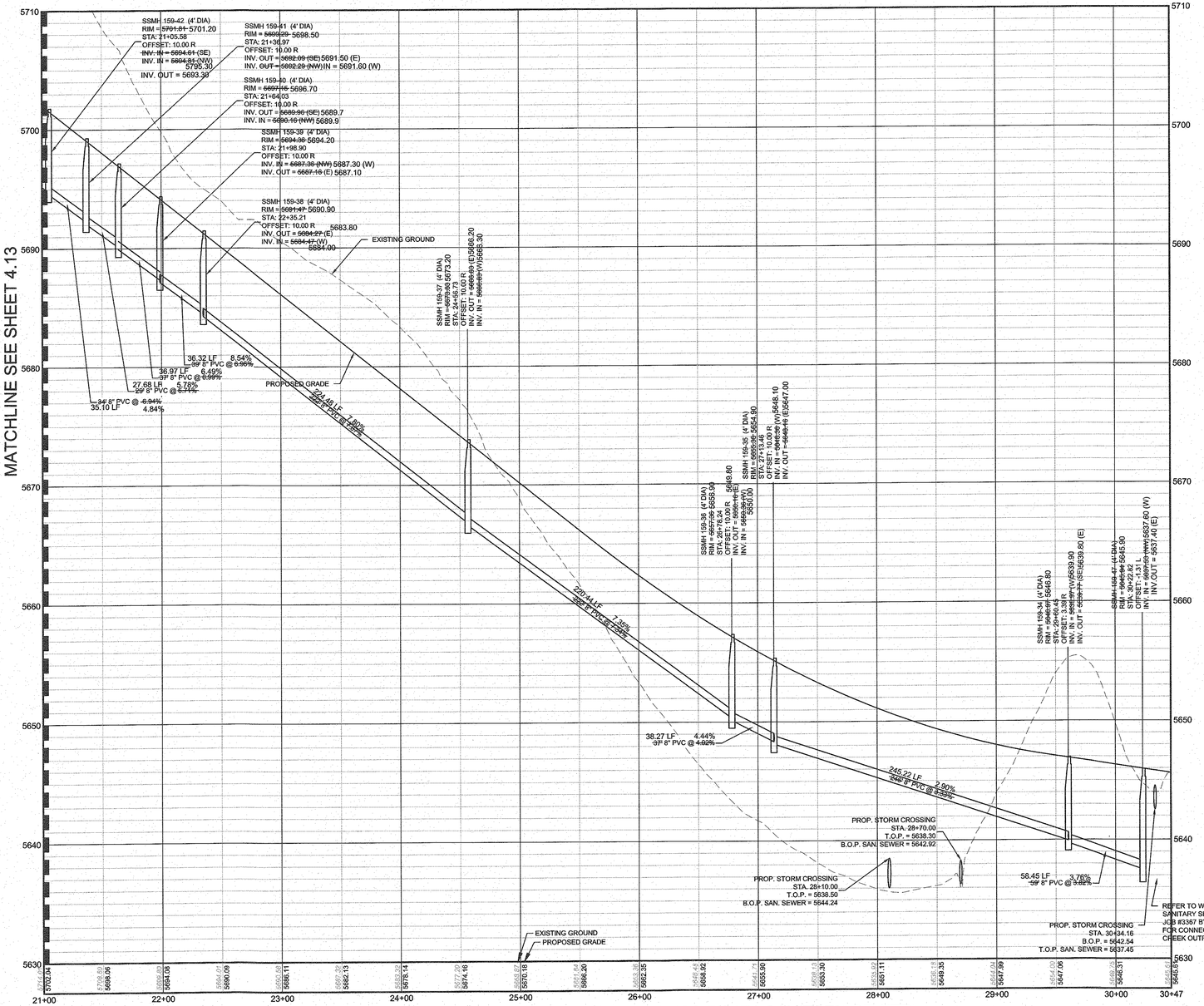
SHEET NUMBER 4.0

4.0 (5) SANITARY 15=50 9/18/14 AS-BUILT.dwg



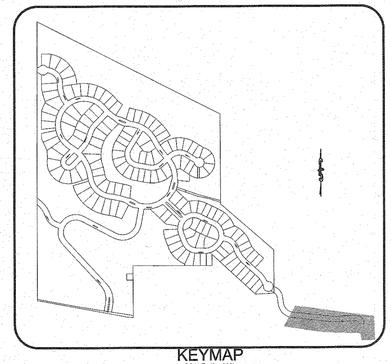
PLAN: (EMERGENCY ACCESS ROAD) SANITARY SEWER 21+00 TO 30+50

HORIZONTAL SCALE: 1" = 50'



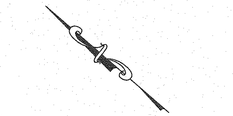
PROFILE: (EMERGENCY ACCESS ROAD) SANITARY SEWER

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



KEYMAP
SCALE: 1" = 800'

AS-BUILT



50 25 0 50 100

SCALE: 1" = 50'

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
BO	PROPOSED LOW POINT BLOW-OFF
W	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

No.	Revisions	Date	Init.	Appr.	Date
			MJP		6/2/14
			SJK		8/19/13
			SJK		8/19/13

10333 E. Dry Creek Rd.
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Englewood, CO 80112
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Fax: (720) 482-9546
CVL CONSULTANTS

Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
(EMERGENCY ACCESS ROAD)
SANITARY SEWER P&P 21+00 TO31+50

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CITY ENGINEER

DATE

3364
JOB NUMBER

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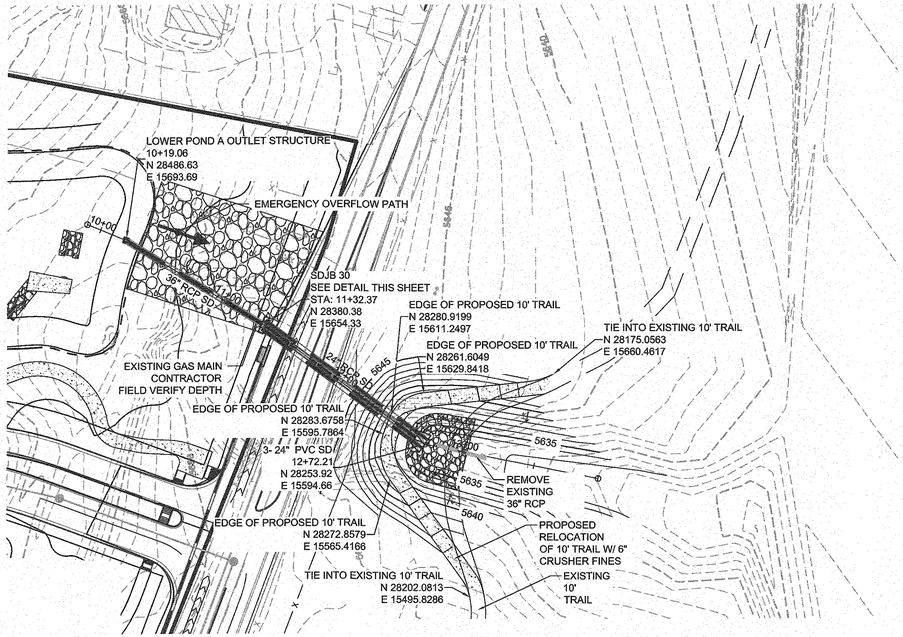
ENGINEERING DIVISION ACCEPTANCE BLOCK

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
UNCC UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987

SCALE:	AS SHOWN	FILE NO:	30131801
DRAWN BY:	GM	CHECKED BY:	SJK
DATE:	5/31/2013		

SHEET NUMBER **4.14**

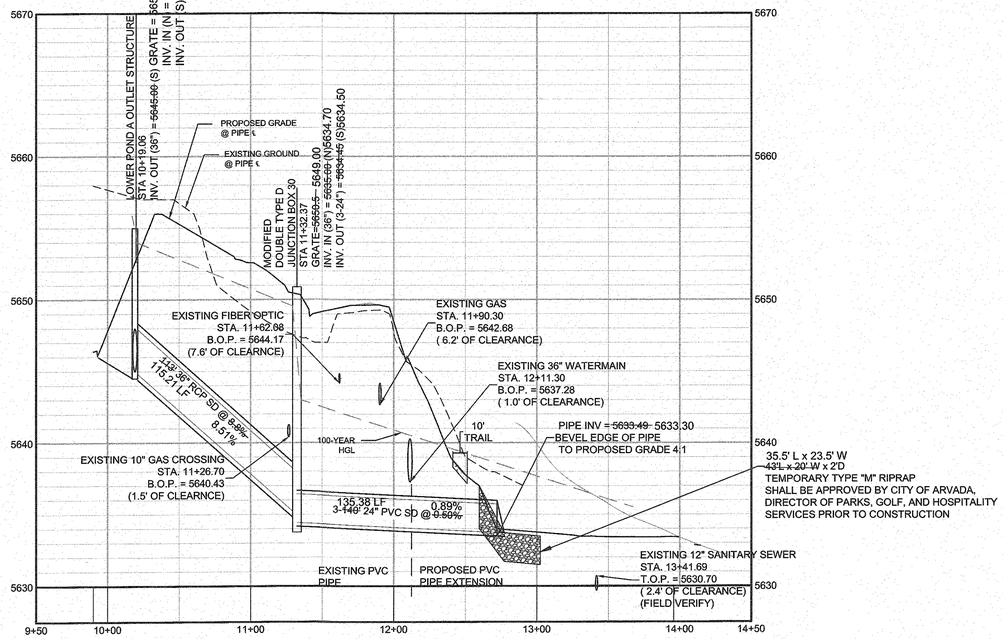
4.14 (J) SANITARY 21+00 to 30+50 AS-BUILT.dwg



PLAN: LOWER POND A OUTFALL

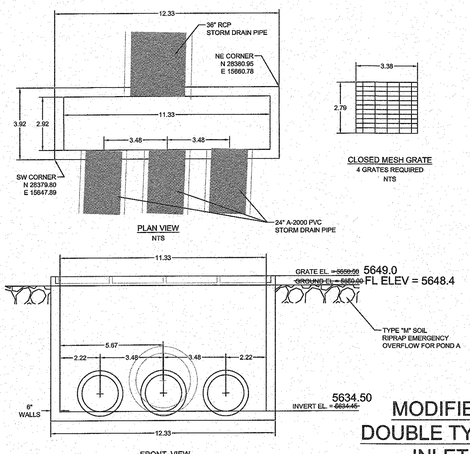
HORIZONTAL SCALE: 1" = 50'

AS-BUILT



PROFILE: LOWER POND A OUTFALL

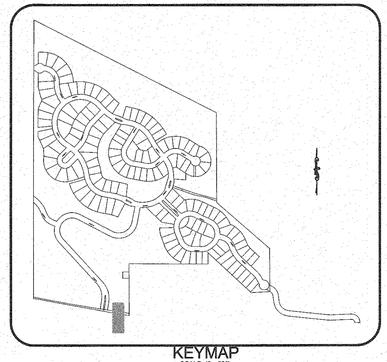
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



MODIFIED DOUBLE TYPE D INLET

NOTE:
SEE C.D.O.T M-604-11 TYPE D INLET DETAIL FOR STRUCTURAL DETAILS
(NO INTERIOR WALLS)

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED LOW POINT BLOW-OFF
	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

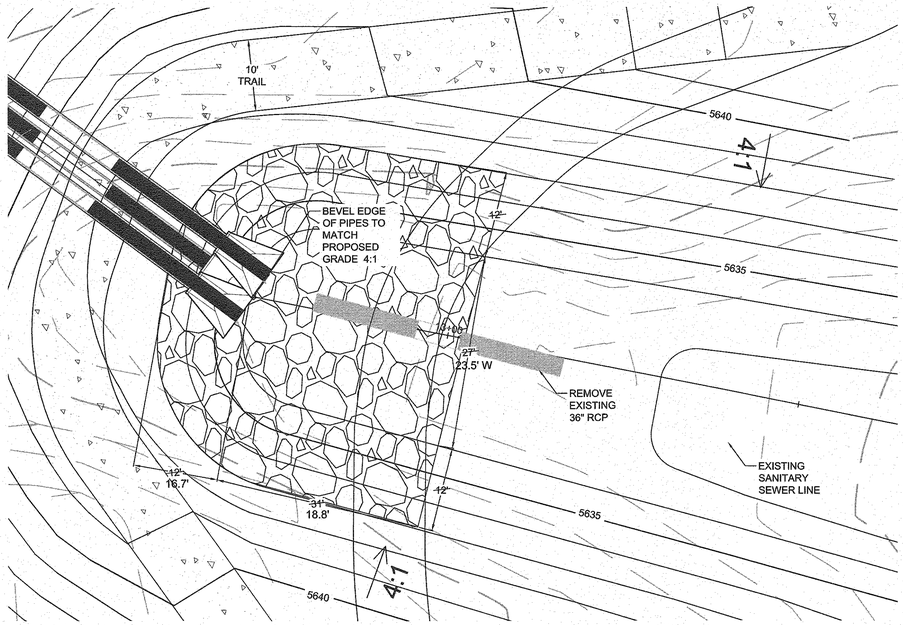


KEYMAP
SCALE: 1" = 600'

50 25 0 50 100

SCALE: 1" = 50

NOTE:
1) SEE SHEET 5.1 FOR POND DETAILS.



PLAN: RIPRAP DETAIL

HORIZONTAL SCALE: 1" = 10'

COLORADO REGISTERED JAMES J. JANNICKE 35693 PROFESSIONAL ENGINEER 8-3-15

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AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

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PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

CITY ENGINEER

DATE

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	UTILITY CONFLICTS RESOLVED	11/3/2013	ILG		
7	RFI #20	8/27/2014	MJP		
		8/19/13	SJK		
		8/19/13	SJK		

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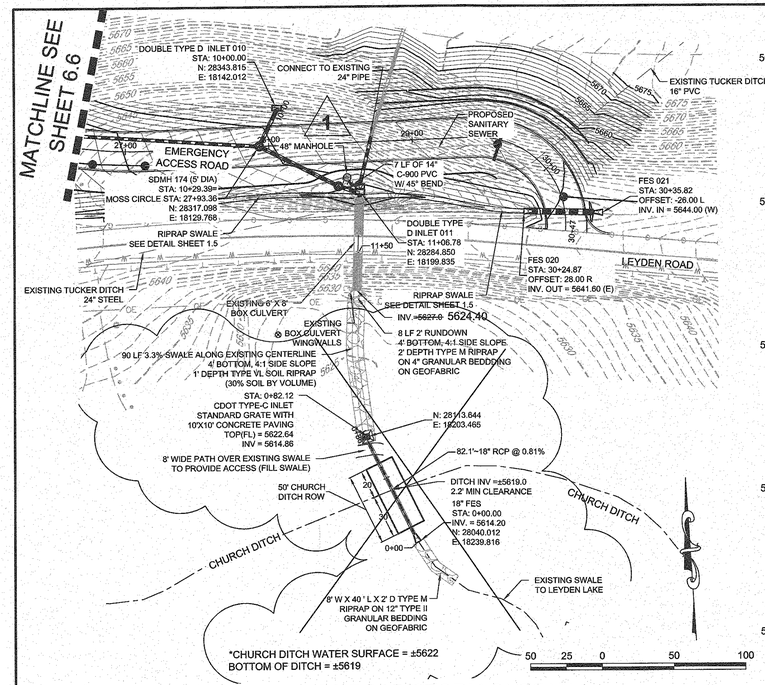
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
LOWER POND A OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: JJC
CHECKED BY: SJK
DATE: 5/31/2013
SHEET NUMBER: 5.0b
5.0b POND A AS-BUILT.dwg

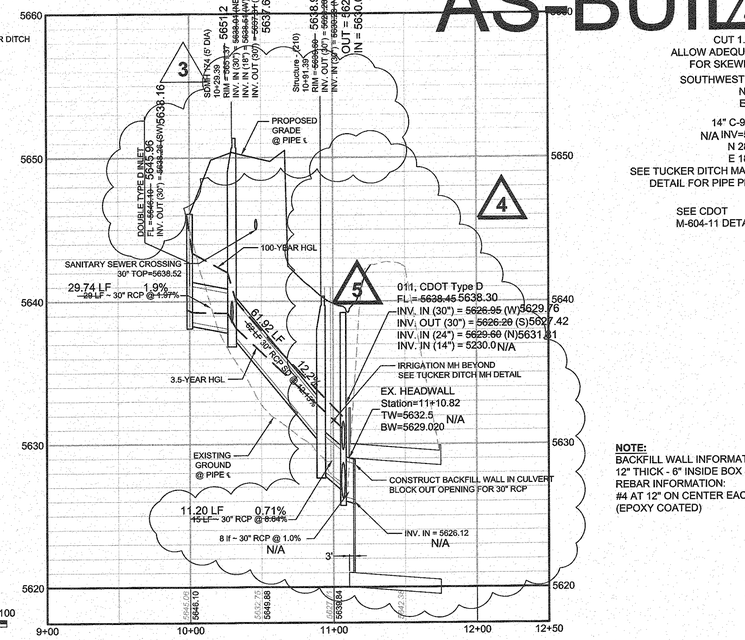
AS-BUILT 4



PLAN: EMERGENCY ACCESS ROAD STORM OUTFALL

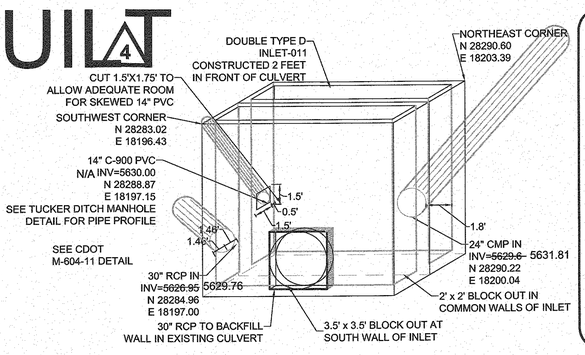
HORIZONTAL SCALE: 1" = 50'

SCALE: 1" = 50'



PROFILE: EMERGENCY ACCESS ROAD STORM OUTFALL 10+00 TO 12+33

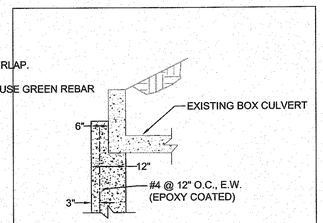
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



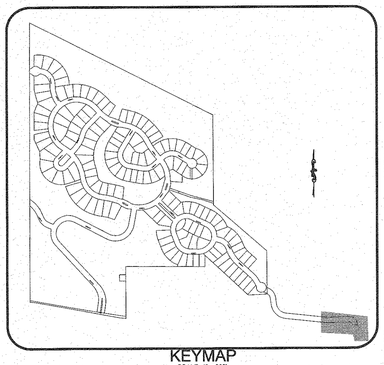
PLAN: INLET 011 ISOMETRIC DETAIL

HORIZONTAL SCALE: 1" = 5'

NOTE:
BACKFILL WALL INFORMATION:
12" THICK - 6" INSIDE BOX & 6" OVERLAP.
REBAR INFORMATION:
#4 AT 12" ON CENTER EACH WAY. USE GREEN REBAR (EPOXY COATED)



BACKFILL WALL DETAIL
NTS



CHURCH DITCH WATER AUTHORITY NOTES

1. DEFINITIONS
   A. FACILITY OWNER - CHURCH DITCH WATER AUTHORITY (CDWA)
   B. PROPERTY OWNER - **(TO BE COMPLETED)**
   C. CONTRACTOR - **(TO BE COMPLETED)**
   D. ENGINEER - **(TO BE COMPLETED)**.
2. ALL IRRIGATION AND CANAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DESIGN CRITERIA FOR FACILITIES OF THE CHURCH DITCH WATER AUTHORITY, LATEST EDITION, EXCEPT AS MODIFIED BY THESE PROJECT DRAWINGS.
3. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD CDWA HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CDWA.
4. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH CDWA REPRESENTATIVE AND **(FILL IN LOCAL GOVERNING MUNICIPALITY OR COUNTY GOVERNMENT)** AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION. THOSE IN ATTENDANCE SHALL INCLUDE OWNER'S REPRESENTATIVE, ENGINEER, CONTRACTOR, AND OTHER AFFECTED AGENCIES. CONSTRUCTION PLANS WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING.
5. TECHNICAL APPROVAL BY CDWA OF THIS UTILITY CROSSING DESIGN OR FACILITY IMPROVEMENT SHALL NOT CONSTITUTE AUTHORIZATION TO BEGIN WORK. A LICENSE AGREEMENT, APPROVED CONSTRUCTION SCHEDULE AND WRITTEN NOTICE TO PROCEED FROM CDWA ARE ALSO REQUIRED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. FOLLOWING THE APPROVAL OF THE DESIGN PLANS AND LICENSE AGREEMENT AND PRIOR TO THE PRE-CONSTRUCTION MEETING, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT A CONSTRUCTION SCHEDULE TO CDWA FOR REVIEW AND APPROVAL. WRITTEN APPROVAL FROM CDWA OF AN ACCEPTED CONSTRUCTION SCHEDULE AND NOTICE TO PROCEED WILL BE NECESSARY PRIOR TO THE INITIATION OF ANY CONSTRUCTION WORK RELATED TO THIS DESIGN. THE SCHEDULE SHALL INCLUDE THE DAY, MONTH, AND YEAR WHEN WORK IS TO TAKE PLACE.
6. NO WORK THAT IMPACTS THE DITCH'S ABILITY TO OPERATE, MAINTAIN OR ACCESS IT'S FACILITES AND/OR CONVEY WATER WHEN REQUIRED WILL BE ALLOWED.
7. CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, UNLESS OTHERWISE AUTHORIZED BY CDWA AND PROPERTY OWNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS ACCESS FOR CDWA PERSONNEL ALONG THE LENGTH OF THE EXISTING CANAL THROUGHOUT THE COURSE OF THE PROJECT.
9. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY CDWA. CDWA RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DO NOT CONFORM TO STANDARDS AND SPECIFICATIONS.
10. CONTRACTOR SHALL VERIFY ACCURACY BETWEEN WORK SET FORTH ON THESE PLANS AND WORK REQUIRED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND CDWA REPRESENTATIVE PRIOR TO START OF CONSTRUCTION.
11. IT IS THE ENGINEER'S RESPONSIBILITY TO RESOLVE CONSTRUCTION PROBLEMS WITH CDWA DUE TO CHANGED CONDITIONS ENCOUNTERED BY CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE SOLE OPINION OF CDWA, PROPOSED ALTERATIONS TO THE APPROVED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO CDWA FOR REVIEW AND APPROVAL, PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.
12. GROUNDWATER ENCOUNTED DURING CONSTRUCTION SHALL NOT BE RELEASED TO THE CHURCH DITCH OR OTHER FACILITIES WITHOUT WRITTEN APPROVAL FROM CDWA.
13. WHERE THE EXISTING SIDES OR BOTTOM OF THE DITCH IS DISTURBED AND IS TO BE REPLACED, THE TOP TWO (2) FEET OF BACKFILL MATERIAL SHALL BE CLAY CONTAINING AT LEAST 70% BY DRY WEIGHT PASSING THE #200 SIEVE OR CONTAINING TWO PERCENT (2%) POWDERED DRY BENTONITE BY DRY WEIGHT OF SOIL BLENDED INTO THE BACKFILL MATERIAL.
14. COMPACTION TESTING FREQUENCY: COMPACTION OF BEDDING AND ALL TYPES OF BACKFILL SHALL BE TESTED AT A RATE OF AT LEAST ONE (1) TEST PER 200 CUBIC YARDS OF FILL MATERIAL OR PORTIONS THEREOF AND AT LEAST ONE (1) TEST PER 150 FEET, WHICHEVER CONTROLS. THE TESTING SHALL BE AT VARIOUS DEPTHS AND LOCATIONS. TEST RESULTS SHALL BE SUBMITTED TO CDWA'S REPRESENTATIVE WITHIN TWENTY-FOUR (24) HOURS OF THE TEST OR ON THE NEXT WORKING DAY.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAILY CLEANING OF DEBRIS THAT ENTERS THE CANAL RESULTING FROM THE CONSTRUCTION. CONTRACTOR SHALL MAINTAIN SILT FENCE AND OTHER EROSION CONTROL BMP'S ON A DAILY BASIS.
16. UNLESS ANOTHER SPECIFIC MAINTENANCE AGREEMENT IS IN PLACE, CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FUNCTIONING OF FACILITY IMPROVEMENTS FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION / CONSTRUCTION ACCEPTANCE OF THE IMPROVEMENTS BY CDWA. ANY FAILURE DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY CONTRACTOR TO THE SATISFACTION OF CDWA AT CONTRACTOR'S EXPENSE.
17. RECORD DOCUMENTS ARE TO BE SUPPLIED TO CDWA PRIOR TO SUBSTANTIAL COMPLETION / CONSTRUCTION ACCEPTANCE OF THE CONSTRUCTION. MYLAR RECORD DOCUMENTS AND AN ELECTRONIC VERSION OF THE DRAWINGS (PDF OR AUTOCAD FORMAT) SHALL BE SUBMITTED PRIOR TO CDWA ACCEPTANCE AND SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
BO	PROPOSED LOW POINT BLOW-OFF
M	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

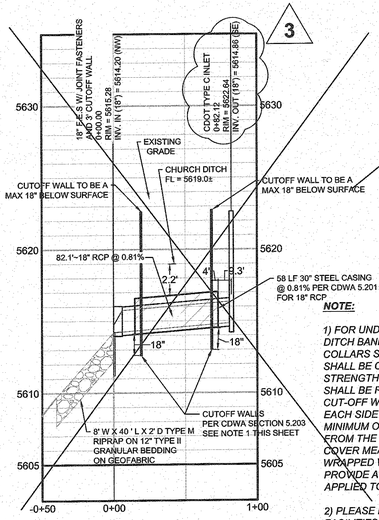
NOTE:

THE IMPROVEMENTS SOUTH OF LEYDEN ROAD ARE SHOWN HERON FOR ILLUSTRATIVE PURPOSES ONLY. ANY IMPROVEMENTS IN THIS AREA ARE BEING DESIGNED AND CONSTRUCTED BY JEFFERSON COUNTY, UNDER THEIR REVIEW AUTHORITY, AS AN EXTENSION OF THE JEFFERSON COUNTY LEYDEN LANDFILL DRAINAGE BYPASS SYSTEM. THESE IMPROVEMENTS ARE THE PURVIEW OF JEFFERSON COUNTY, ARE SUBJECT TO CHANGE, AND NO SUBSEQUENT REVIEW OR APPROVAL BY THE CITY OF ARVADA WILL BE REQUIRED.

CDWA DETAILS REMOVED

CDWA DETAILS REMOVED

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.



CDWA DETAIL

HORIZONTAL DIR. DRILL CUTOFF WALL

NOTE:

1) FOR UNDERGROUND UTILITIES INSTALLED BY TRENCHING THROUGH THE DITCH BANKS, OR WITHIN THE DITCH ROW, REINFORCED CONCRETE CUTT-OFF COLLARS SHALL BE PROVIDED AT BOTH RIGHT OF WAY LINES. CUT-OFF WALLS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE (COMPRESSIVE STRENGTH 3000 PSI AFTER 28 DAYS) TO A MINIMUM THICKNESS OF 8", AND SHALL BE REINFORCED WITH #4 REINFORCING BARS AT 8" EACH WAY. THE CUT-OFF WALLS SHALL BE SET INTO UNDISTURBED SOIL A MINIMUM OF 18" TO EACH SIDE OF AND BELOW THE ENCASEMENT PIPE, AND SHALL BE CAST A MINIMUM OF 4 FEET FROM THE END OF THE CASING AND A MINIMUM OF 3 FEET FROM THE LIMITS OF THE FLOW SECTION, AND SHALL HAVE A MAXIMUM OF 18" COVER MEASURED AT THE TOP OF EACH WALL. THE CASING PIPE IS TO BE WRAPPED WITH A LAYER OF RAM-NECK OR SIMILAR MATERIAL SO AS TO PROVIDE A WATERTIGHT SEAL WITH THE CONCRETE. THIS MATERIAL IS TO BE APPLIED TO THE CASING PIPE WITHIN THE FORMS FOR THE CUT-OFF WALL.

2) PLEASE REFER TO " DESIGN REVIEW PROCESS AND DESIGN CRITERIA FOR FACILITIES, CDWA CHURCH DITCH WATER AUTHORITY AMENDED 12/13/10" FOR PIPE CASING REQUIREMENTS AND CUT-OFF WALL DESIGN..

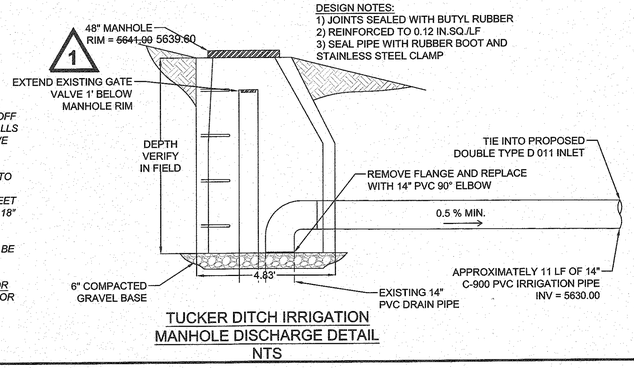
PROFILE: CHURCH DITCH STORM CROSSING

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

CDWA DETAIL

SEEPAGE COLLAR

DESIGN NOTES:
1) JOINTS SEALED WITH BUTYL RUBBER
2) REINFORCED TO 0.12 IN.SQ./LF
3) SEAL PIPE WITH RUBBER BOOT AND STAINLESS STEEL CLAMP



TUCKER DITCH IRRIGATION MANHOLE DISCHARGE DETAIL
NTS

ADDITIONAL CHURCH DITCH WATER AUTHORITY NOTES

1. ALL BACKFILL SHALL BE PLACED IN LIFTS AND SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY FOR THE MATERIAL AS DETERMINED BY TESTS MADE IN CONFORMANCE WITH ASTM D698 (STANDARD PROCTOR COMPACTION METHOD). SOIL OF POOR QUALITY REMOVED FROM THE EXCAVATION SHALL BE REMOVED FROM THE SITE AND SELECT FILL USED FOR TRENCH, BACKFILL AND CONSTRUCTION OF EMBANKMENTS. THE CDWA ENGINEER WILL INSPECT THE CONSTRUCTION AND THEIR FEES WILL BE REIMBURSED BY THE PERMIT APPLICANT. SOIL DENSITY TESTS, IF REQUIRED BY THE CDWA, SHALL BE DONE BY AN INDEPENDENT LABORATORY AND PAID FOR BY THE APPLICANT. SOIL'S USED FOR SELECT FILL SHALL BE CLASSIFIED IN CONFORMANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM AS TYPE SM, SC, ML, CL, OR ANY COMBINATION.
2. BACKFILL SHALL NOT BE PLACED IN STANDING WATER NOR SHALL SNOW, ICE, FROZEN EARTH OR ORGANIC MATERIAL BE INCORPORATED IN THE FILL. THE DITCH SHALL BE LINED FOR 10 FEET ON EACH SIDE OF THE CROSSING WITH A 6-INCH LAYER OF IMPERVIOUS MATERIAL SUCH AS CLAY, OR BENTONITE. THE IMPERVIOUS MATERIAL SHALL BE SPREAD EVENLY FOR 10 FEET ON EACH SIDE OF THE TRENCH CROSSING AT A RATE OF ONE POUND PER CUBIC FOOT. IT SHALL THEN BE MIXED WITH THE TOP 3 TO 4 INCHES OF EXISTING GROUND SURFACE MATERIALS BY HAND RAKING OR TILLING AND COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY. THE CDWA BANK SIDE SLOPE SHALL BE CONSTRUCTED TO A SLOPE NO STEEPER THAN OF 2:1.
3. CONTINUOUS ACCESS ALONG THE CHURCH DITCH ACCESS ROADS MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. A NOTE TO THIS EFFECT SHALL BE ADDED TO THE DRAWINGS.

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UNCC UTILITY NOTIFICATION CENTER OF COLORADO



I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

JAMES J. JANNICKE
COLORADO P.E. 35693

PREPARED UNDER THE SUPERVISION OF

CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	REVISIONS PER JEFCO	3/27/14	JFF		
5	REVISED RCP/ TYPE D INVERTS TO CULVERT	3/26/14	ILG		
4	REVISED CULVERT/INLET CONFIGURATION	1/10/13	JJC		
3	REVISED SDMH RIM ELEVATIONS	8/29/13	ILG		
1	REVISE SHEET 6.7 PER TUCKER DITCH	7-24-13	ILG		

CVL CONSULTANTS
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LEYDEN RANCH WEST
Arvada, Colorado
EMERGENCY ACCESS ROAD STORM OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: BPW
CHECKED BY: SJK
DATE: 5/31/2013

SHEET NUMBER **6.7**

6.7 (J) STORM Z 2-53-SUMT.dwg

~~CONSTRUCTION PLANS~~ RECORD DRAWINGS

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
A PORTION OF SECTION 25 AND A PORTION OF SECTION 26
TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M.
CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 26 BEARS S 00°00'39" W AND MONUMENTED AS FOLLOWS:

- THE EAST QUARTER CORNER OF SECTION 26 BEING A FOUND CHISELED "+" IN THE TOP OF A 7"x14" STONE WITH CHISELED "½" ON THE WEST SIDE FLUSH WITH GROUND LEVEL.
- THE SOUTHEAST CORNER OF SECTION 26 BEING A FOUND CHISELED "+" IN THE TOP OF A 6"x11" SANDSTONE 1.1' ABOVE GROUND LEVEL IN CONCRETE.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

CITY OF ARVADA DATUM CONVERSION = NAVD 88 - 2.45' = 5896.79

PUBLIC IMPROVEMENT QUANTITIES

STREET QUANTITIES

ITEM DESCRIPTION	CENTER LENGTH (LF)	PAVEMENT (SY)	VERTICAL CURB (LF)	SIDEWALK LENGTH (LF)	X-PANS (EA)
LEYDEN ROAD (EAST OF QUAKER - NORTH SIDE)	463	1,253	425	0	0
LEYDEN ROAD (EAST OF QUAKER - SOUTH SIDE	1,270	1,925	1,072	719	1
QUAKER STREET	161	304	51	0	0

STORM SEWER QUANTITIES
(LEYDEN ROAD EAST OF QUAKER STREET - SOUTH SIDE)

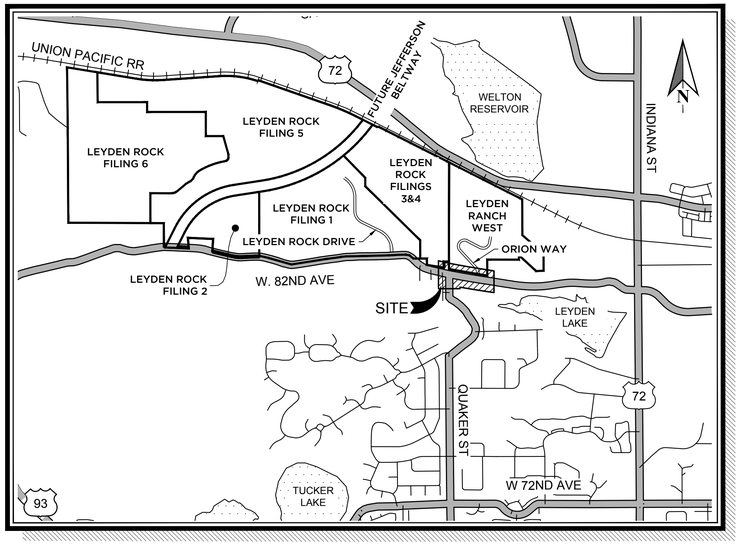
ITEM DESCRIPTION	QUANTITY	UNIT
36" RCP (CLASS III)	6	LF
18" RCP (CLASS III)	67	LF
5' TYPE R INLET (W/ WQ HOOD)	1	LF
10' TYPE R INLET	1	EA
STORMCEPTOR STC-900	1	EA
REMOVAL OF EXISTING 6' DIA. MANHOLE	1	EA

CERTIFICATION

"THESE CONSTRUCTION PLANS FOR LEYDEN ROAD STREET IMPROVEMENTS (QUAKER STREET TO ORION WAY) WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS"

COLORADO LICENSED OWEN KEITH KEENAN 03-05-18 47677 PROFESSIONAL ENGINEER

OWEN KEITH KEENAN, PE
KT ENGINEERING



VICINITY MAP
1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET *
02	GENERAL NOTES SHEET
03	TYPICAL SECTIONS *
04	TYPICAL SECTIONS AND DETAILS *
05	RIGHT-OF-WAY AND EASEMENTS 1
06	RIGHT-OF-WAY AND EASEMENTS 2
07	DEMOLITION & EXISTING UTILITY PLAN *
08	OVERALL GRADING AND STORM PLAN *
09	EROSION CONTROL PLAN *
10	EROSION CONTROL DETAILS
11	EROSION CONTROL DETAILS
12	SIGNING AND STRIPING PLAN *
13	ROADWAY PLAN AND PROFILE - LEYDEN ROAD *
14	ROADWAY PLAN AND PROFILE - LEYDEN ROAD *
15	ROADWAY PLAN AND PROFILE - QUAKER STREET *
16	CROSS SECTIONS - LEYDEN ROAD *
17	CROSS SECTIONS - LEYDEN ROAD *
18	CROSS SECTIONS - LEYDEN ROAD *
19	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD *
20	DETAILS *
21	DETAILED CURB RAMP GRADING PLAN *
*	DENOTES REVISED SHEET BY KT ENGINEERING
1	WATER PLAN
2	WATER PROFILE

LIST OF CONTACTS:

ENGINEER
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: OWEN KEENAN, PE

FIRE PROTECTION
ARVADA FIRE PROTECTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TRANG TRAN

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

- EXISTING MAJOR CONTOUR (5400)
- EXISTING MINOR CONTOUR
- EXISTING ELECTRIC UTILITY LINE (E)
- EXISTING UTILITY POLE
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING GAS UTILITY LINE (G)
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- PROPOSED MAJOR CONTOUR (5400)
- PROPOSED MINOR CONTOUR
- PROPOSED BOUNDARY LINE
- PROPOSED CENTER LINE
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SETBACK
- PROPOSED SANITARY SEWER LINE (100 LF 8" SAN)
- PROPOSED SANITARY SEWER SERVICE (SS STA: 1+00.00)
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UNDERDRAIN
- PROPOSED STORM SEWER LINE (100 LF 18" RCP)
- PROPOSED TYPE R INLET
- PROPOSED TYPE 16 INLET
- PROPOSED BOX BASE MANHOLE
- PROPOSED CIRCULAR MANHOLE
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- PROPOSED WATER LINE (100 LF 8" WAT)
- PROPOSED WATER SERVICE AND METER
- PROPOSED IRRIGATION SERVICE AND METER
- PROPOSED WATER GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED REDUCER
- PROPOSED BLOW-OFF
- PROPOSED BEND W/ THRUST BLOCK
- PROPOSED CROSS
- PROPOSED TEE
- PROPOSED AIR RELEASE VALVE
- PROPOSED PRESSURE REDUCING VALVE
- PROPOSED 100 YR WATER SURFACE ELEVATION
- PROPOSED FLOWLINE SWALE

APPROVED:

CITY ENGINEER _____ DATE _____ JOB NUMBER 3396

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
COVER SHEET

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 05/01/2017

01 OF 21

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-CVR-ARVADA.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

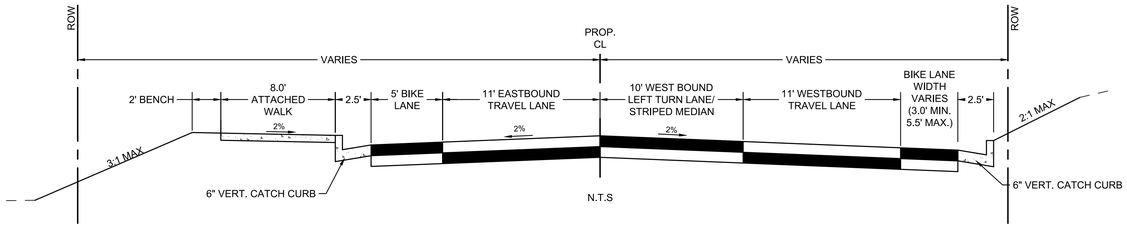
LEYDEN ROAD EAST OF QUAKER STREET (STA 150+58.46 - 153+00.50)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

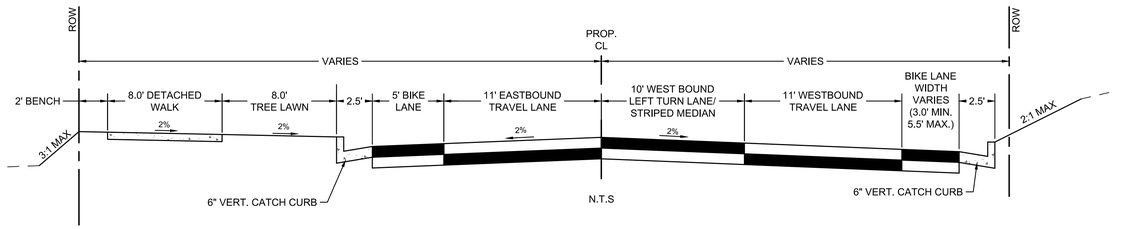
LEYDEN ROAD EAST OF QUAKER STREET (STA 153+37.78 - 154+36.07)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



KT ENGINEERING

12500 W. 58TH AVE. #230
ARVADA, CO 80002

P: 720.638.5190

WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/22/2017	LAL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/06/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED
OWEN MARTIN KEENAN
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
TYPICAL SECTIONS

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = N/A'

SUBMITTED ON:
05/01/2017

APPROVED:

CITY ENGINEER _____ DATE _____ 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

J:\JOBS\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-TYP-SECT-ARVADA.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

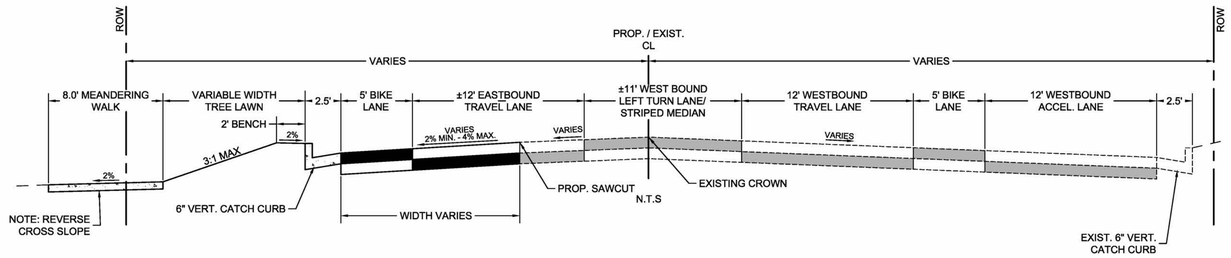
LEYDEN ROAD WEST OF ORION WAY (STA 155+81.39 - 157+32.81)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

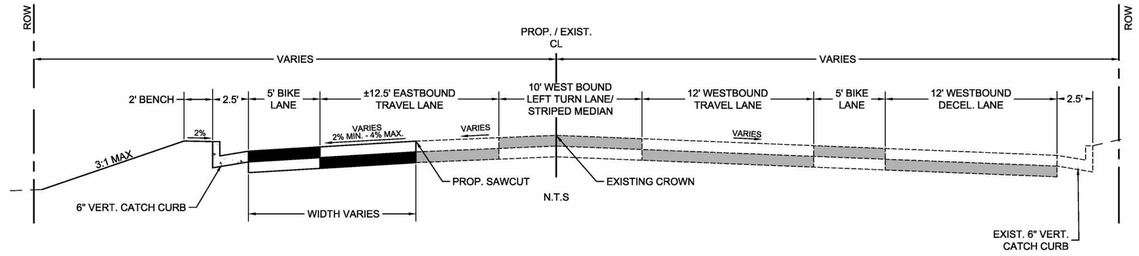
LEYDEN ROAD EAST OF ORION WAY (STA 158+40.02 - 159+30.14)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



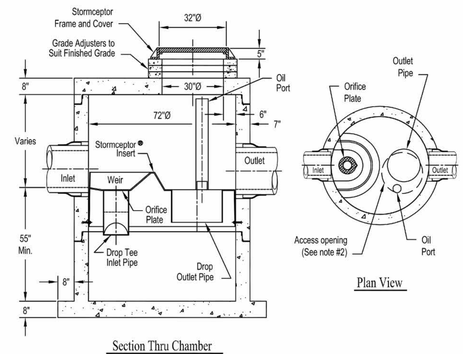
CITY OF ARVADA UTILITIES NOTES:

1. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 24 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.
2. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER OPERATIONS DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.
3. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.
4. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.
5. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.
6. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".
7. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.
8. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.
9. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION.
10. ALL 3/4" AND 1" DIAMETER WATER METER SERVICES SHALL HAVE AN EXTRA HEAVY DOME AND RECESSED COVER WITH A TRAFFIC RATED LID AS SPECIFIED IN SECTION 30.2.1 IN THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS.
11. ALL EXISTING SANITARY SEWER MANHOLES WITHIN THE PROPOSED WORK AREA ARE TO BE PROTECTED THROUGHOUT CONSTRUCTION. MANHOLE FRAME/LIDS SHALL BE ADJUSTED VERTICALLY TO MATCH IN WITH PROPOSED GRADING.

Rinker MATERIALS

Concrete Pipe Division

STC 900 Precast Concrete Stormceptor ®
(900 U.S. Gallon Capacity)



Section Thru Chamber

Plan View

Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 028

STORMCEPTOR STC-900 DETAIL
N.T.S.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	09/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED
OWEN TIMOTHY KENNEDY
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
TYPICAL SECTIONS, DETAILS & NOTES

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 05/01/2017

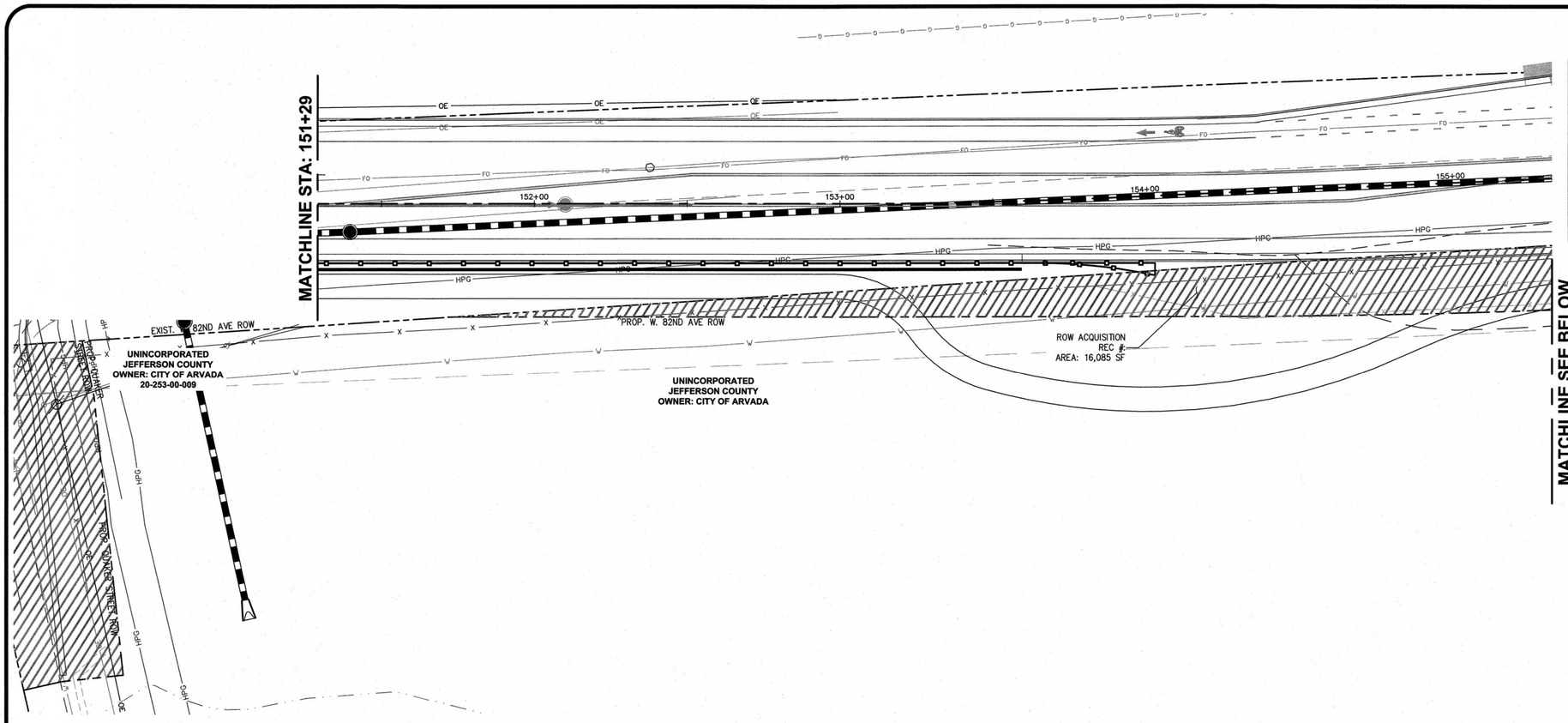
04 OF 21

APPROVED:

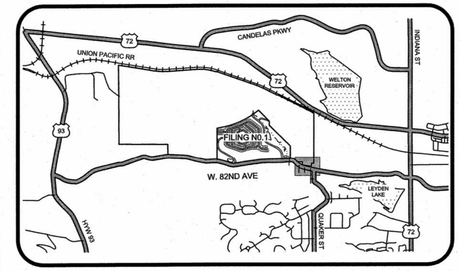
CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

J:\2009\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-TYP-SECT-ARVADA.dwg



JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

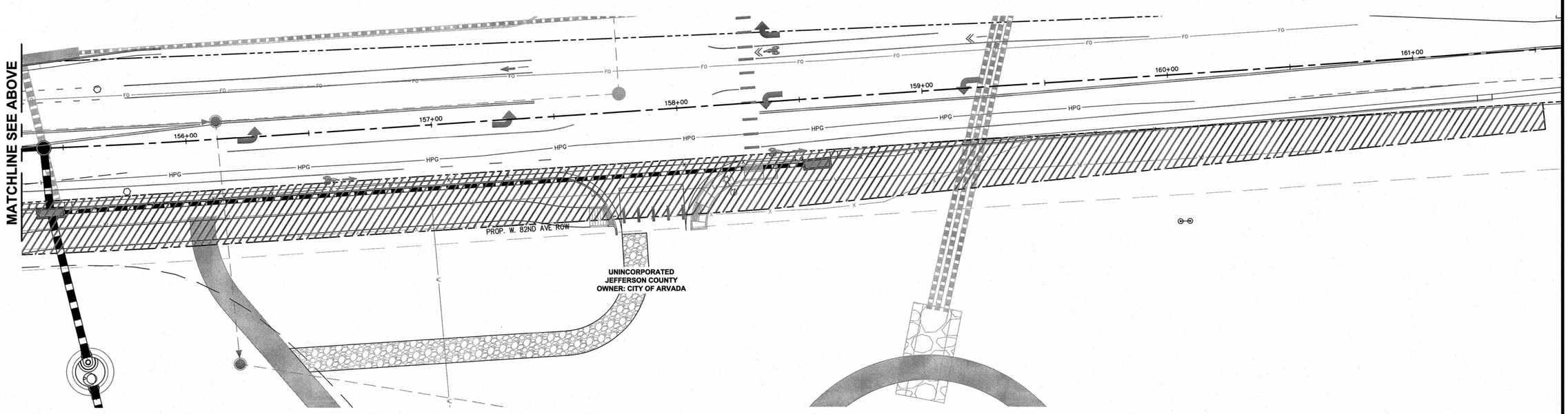


KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 20' HORIZ.

LEGEND

- TEMPORARY GRADING AND PERMANENT UTILITY EASEMENT
- ROW ACQUISITION



APPROVED:

CITY ENGINEER | DATE | JOB NUMBER 3396

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SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.umcc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER
26988
4/7/15

JEHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
RIGHT OF WAY & EASEMENTS 2
prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 2036-213-110-ROW-OFF-TOWN-LEYDEN-RD.dwg
APPROVED BY:

JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 20'
SHEET NO: 6 OF 21

J:\2036\213-110\CIVIL\CONSTRUCTION\3110-ROW-OFF-TOWN-LEYDEN-RD.dwg

UTILITY LEGEND

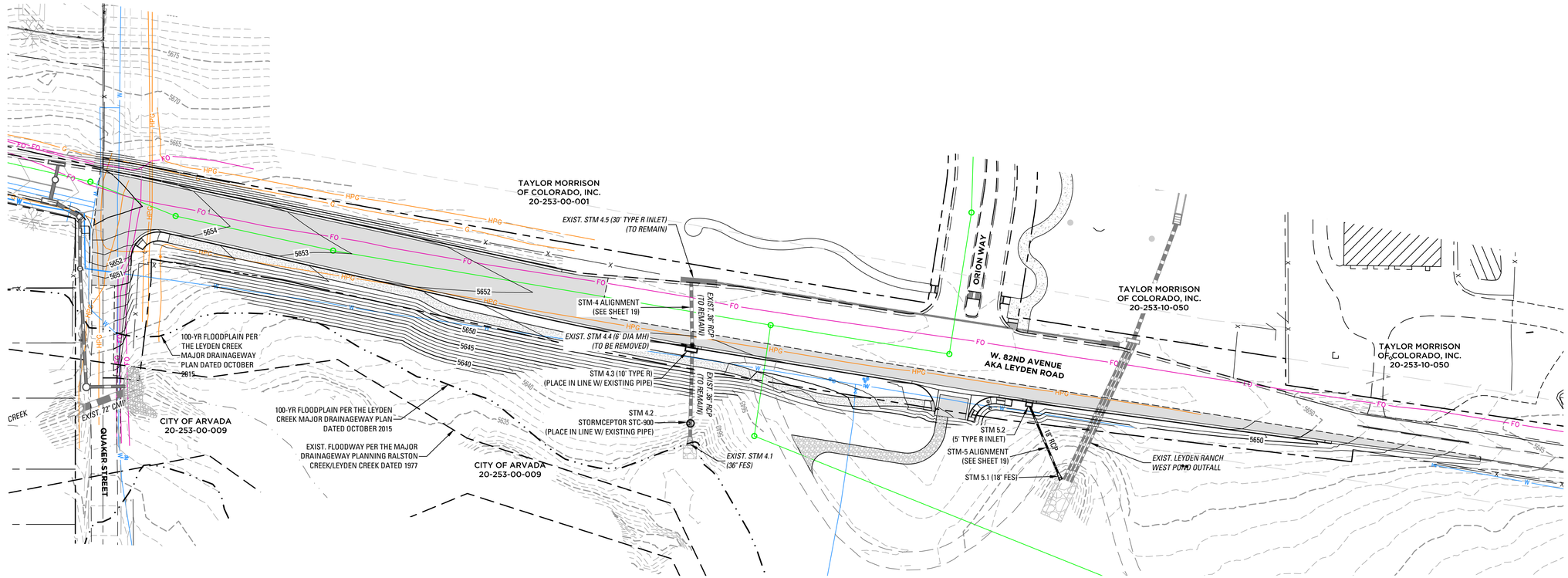
- W — EXISTING WATER LINE
- EXISTING SANITARY LINE
- FO — EXISTING FIBER OPTIC
- HPG — EXISTING HIGH PRESSURE GAS
- G — EXISTING GAS
- EXISTING STORM LINE
- PROPOSED STORM LINE

EXISTING UTILITY NOTE

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES WITHIN THE WORK AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR AN DAMAGE AT HIS EXPENSE.

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES, DRAINAGE CHANNELS, AND ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION



KT ENGINEERING

12500 W. 58TH AVE. #230
ARVADA, CO 80002

P: 720.638.5190

WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/02/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED OWEN KEITH KENNEDY 03-05-18 47677 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
OVERALL GRADING AND STORM PLAN

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 50'

SUBMITTED ON:
05/01/2017

08 OF 21

50 0 25 50 100
SCALE: 1"= 50' HORIZ.

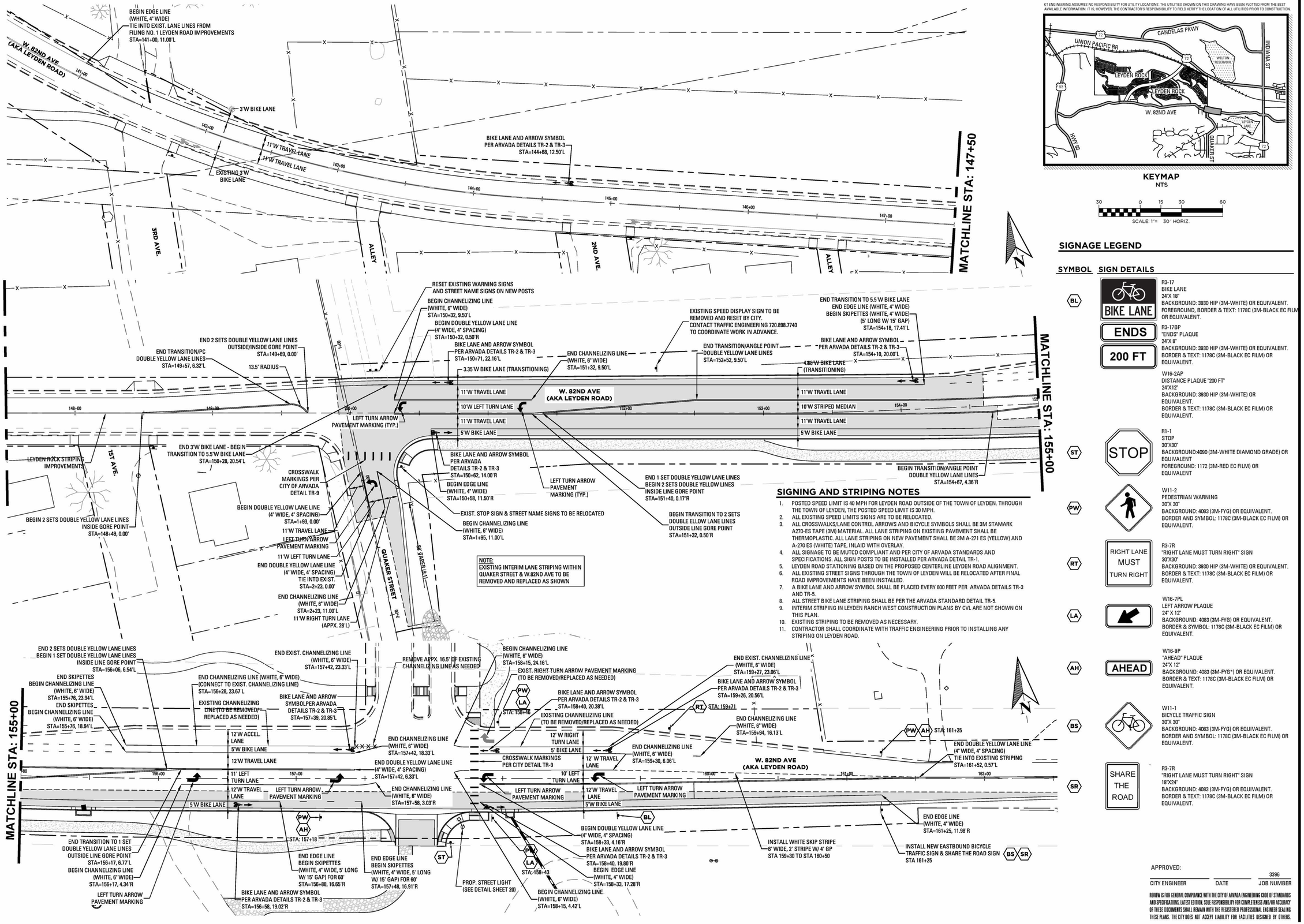
APPROVED:

CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

J:\2018\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-SVBL-SHT-ARVADA.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
NTS

30 0 15 30 60
SCALE: 1"= 30' HORIZ.

SIGNAGE LEGEND

SYMBOL	SIGN DETAILS
BL	R3-17 BIKE LANE 24"X 18" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	R3-17BP "ENDS" PLAQUE 24"X 8" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	W16-2AP DISTANCE PLAQUE "200 FT" 24"X12" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
ST	R1-1 STOP 30"X30" BACKGROUND:4090 (3M-WHITE DIAMOND GRADE) OR EQUIVALENT FOREGROUND: 1172 (3M-RED EC FILM) OR EQUIVALENT
PW	W11-2 PEDESTRIAN WARNING 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
RT	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 30"X30" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
LA	W16-7PL LEFT ARROW PLAQUE 24" X 12" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
AH	W16-9P "AHEAD" PLAQUE 24"X 12" BACKGROUND: 4083 (3M-FYG*) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
BS	W11-1 BICYCLE TRAFFIC SIGN 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
SR	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 18"X24" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.

SIGNING AND STRIPING NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD OUTSIDE OF THE TOWN OF LEYDEN. THROUGH THE TOWN OF LEYDEN, THE POSTED SPEED LIMIT IS 30 MPH.
2. ALL EXISTING SPEED LIMITS SIGNS ARE TO BE RELOCATED.
3. ALL CROSSWALKS/LANE CONTROL ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE THERMOPLASTIC. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND PER CITY OF ARVADA STANDARDS AND SPECIFICATIONS. ALL SIGN POSTS TO BE INSTALLED PER ARVADA DETAIL TR-1.
5. LEYDEN ROAD STATIONING BASED ON THE PROPOSED CENTERLINE LEYDEN ROAD ALIGNMENT.
6. ALL EXISTING STREET SIGNS THROUGH THE TOWN OF LEYDEN WILL BE RELOCATED AFTER FINAL ROAD IMPROVEMENTS HAVE BEEN INSTALLED.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA DETAILS TR-3 AND TR-5.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-5.
9. INTERIM STRIPING IN LEYDEN RANCH WEST CONSTRUCTION PLANS BY CVL ARE NOT SHOWN ON THIS PLAN.
10. EXISTING STRIPING TO BE REMOVED AS NECESSARY.
11. CONTRACTOR SHALL COORDINATE WITH TRAFFIC ENGINEERING PRIOR TO INSTALLING ANY STRIPING ON LEYDEN ROAD.

APPROVED:

CITY ENGINEER DATE 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	09/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:
COLORADO LICENSED
OWEN TRUITT KENNEDY
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
SIGNING AND STRIPING PLAN

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 30'

SUBMITTED ON:
05/01/2017

12 OF 21

J:\2008\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-STRP-ARVADA.dwg

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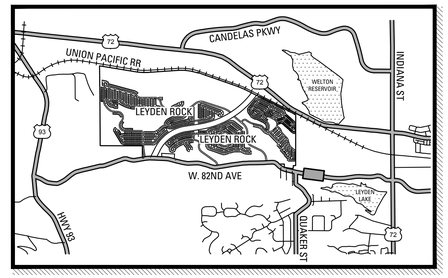


KEYMAP
NTS

W. 82ND AVENUE SOUTH SIDEWALK LINE TABLE

LINE NO.	LENGTH	BEARING
L31	16.14'	N 88°45'21" E
L32	2.29'	S 80°50'44" E

W. 82ND AVENUE SOUTH SIDEWALK CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C32	171.25'	2983.50'	3°17'19"	S 78°54'34" E	171.22'
C33	56.43'	217.00'	14°53'57"	S 73°06'15" E	56.27'
C34	85.31'	191.00'	25°35'22"	S 78°26'58" E	84.60'
C35	34.85'	192.00'	10°23'55"	S 86°02'42" E	34.80'

W. 82ND AVENUE CENTERLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C3	44.78'	2000.00'	1°16'58"	S 80°27'04" E	44.78'

W. 82ND AVENUE CENTERLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L2	171.09'	S 79°48'35" E
L3	691.99'	S 81°05'33" E

W. 82ND AVENUE SOUTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C12	185.41'	2967.00'	3°34'49"	S 79°03'19" E	185.38'

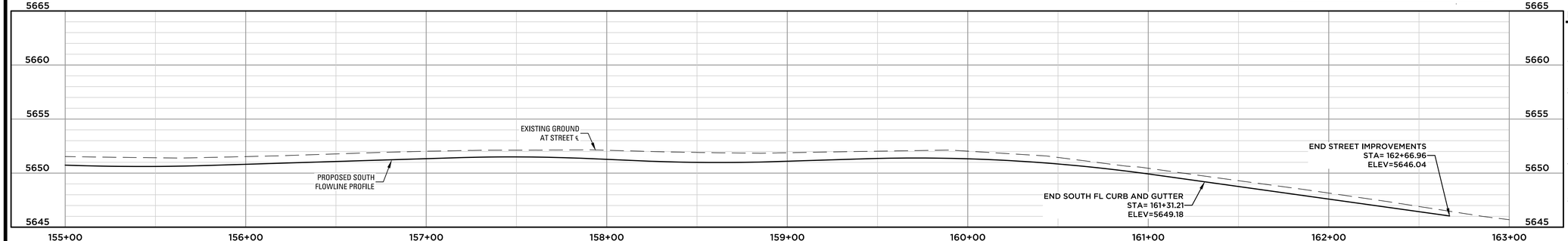
W. 82ND AVENUE SOUTH FLOWLINE LINE TABLE

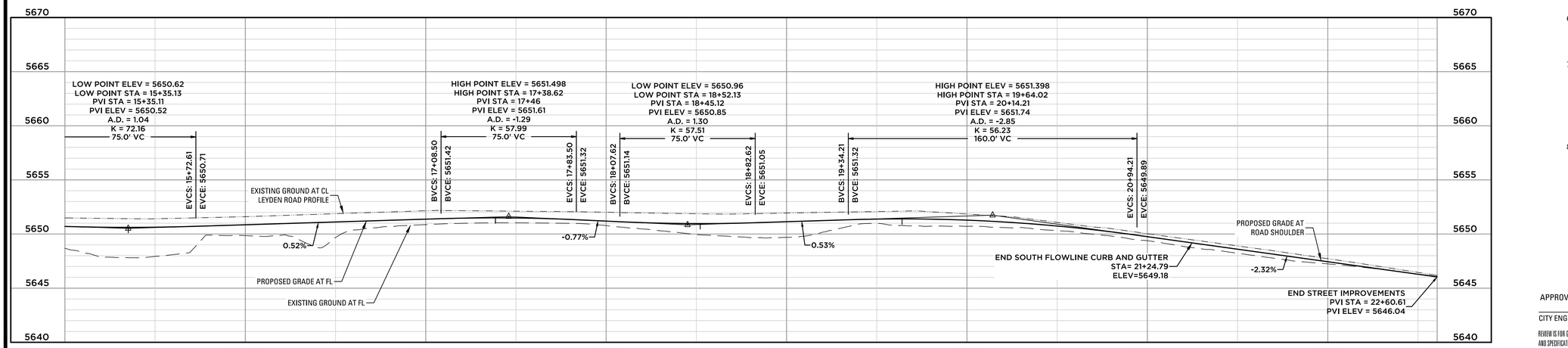
LINE NO.	LENGTH	BEARING
L13	163.71'	S 80°50'44" E
L14	80.00'	S 80°50'44" E
L15	31.45'	S 80°50'48" E
L16	272.32'	S 82°15'20" E
L17	135.82'	S 82°53'55" E

UNLESS SPECIFICALLY LISTED ABOVE, CROSS PAN SHALL BE CONSTRUCTED PER CITY DETAIL ST-8

MODIFIED DEPTH CROSS PAN DETAIL
N.T.S.

LEYDEN ROAD CENTERLINE PLAN & PROFILE





LEYDEN ROAD SOUTH FLOWLINE PROFILE

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FLOWLINE (FL) UNLESS NOTED OTHERWISE.
3. ALL HANDICAP RAMPS SHALL CONFORM TO CURRENT CITY OF ARVADA STANDARDS.
4. CONTRACTOR SHALL COORDINATE ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION.
5. REFER TO SHEET 04 FOR UTILITY NOTES. IT IS ANTICIPATED THAT ADDITIONAL UTILITY LOCATES AND AGENCY COORDINATION WILL BE REQUIRED PRIOR TO CONSTRUCTION.
6. WATER LINE AND UTILITY LINE CROSSINGS/LOWERINGS (IF NEEDED) SHALL BE INSTALLED PER CITY DETAIL W-10 AND W-11.
7. ALL EXISTING MANHOLES, WATER VALVES, WATER APPURTENANCES, GAS APPURTENANCES, WITH ACCESS TO THE EXISTING GROUND SURFACE SHALL BE RAISED/LOWERED TO MAINTAIN ACCESS WITH THE PROPOSED STREET IMPROVEMENTS.
8. ALL EXISTING UTILITY LINES, MANHOLES, WATER VALVES, WATER APPURTENANCES, GAS APPURTENANCES TO REMAIN SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.

APPROVED:

CITY ENGINEER	DATE	3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/02/2017	LAL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:



SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 30'

SUBMITTED ON:
05/01/2017

14 OF 21

J:\2016\LEYDEN ROCK\LEYDEN-RBAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-PP-01-ARVADA.dwg

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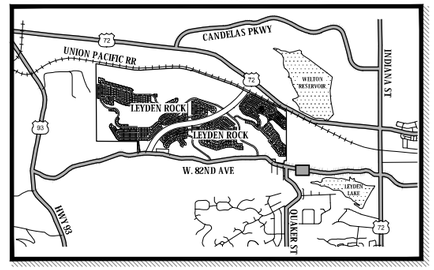
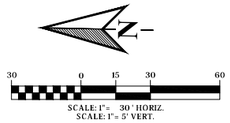
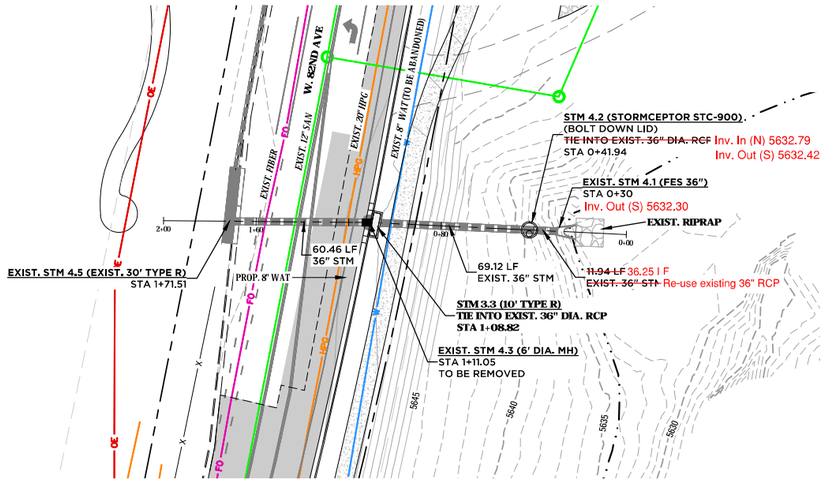
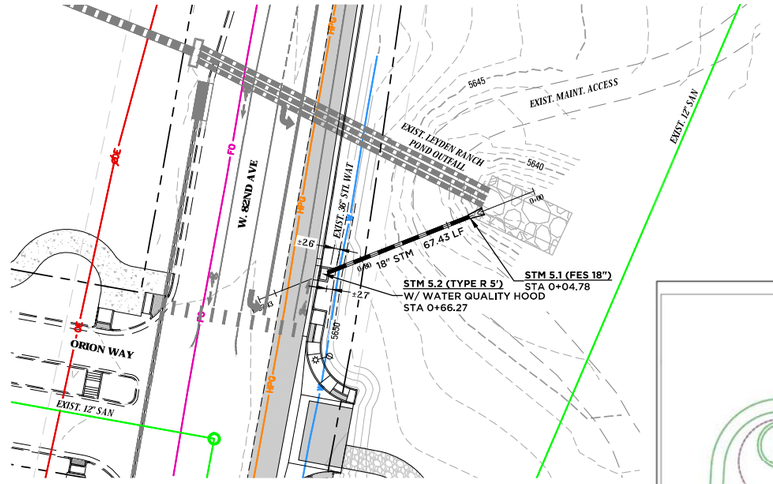


KEYMAP
NTS

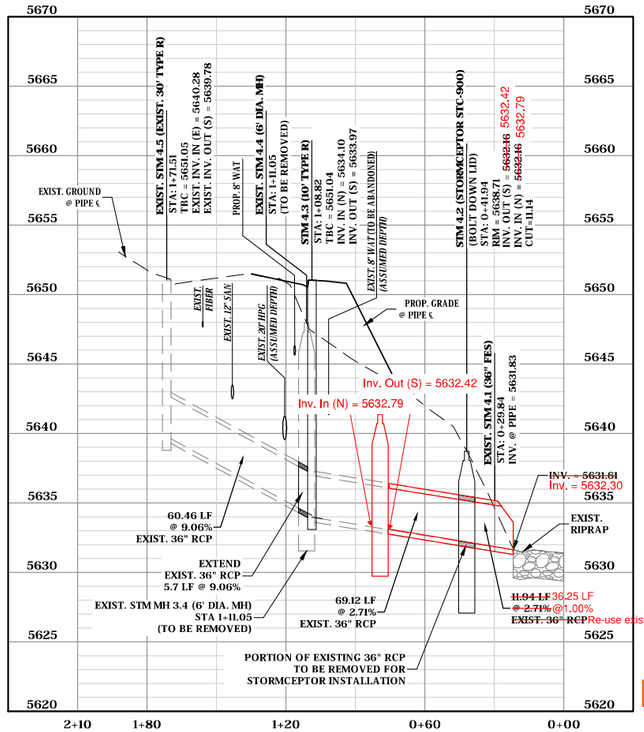




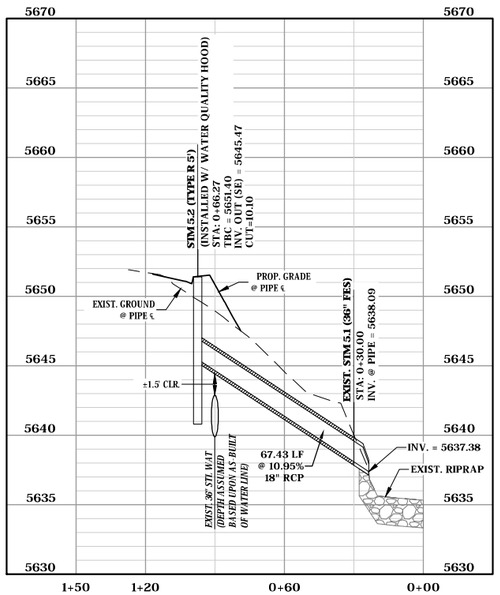
STORM 3 PLAN & PROFILE



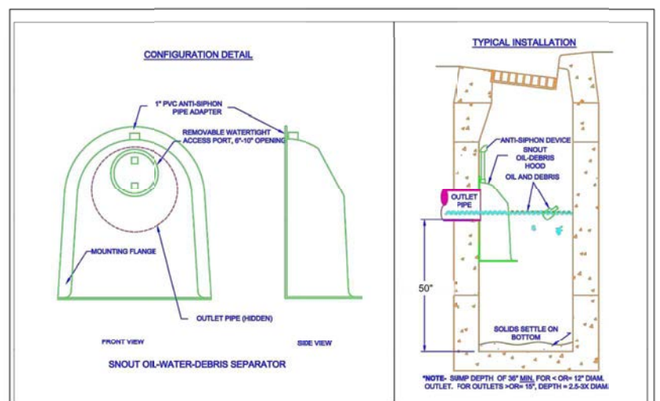
STORM 4 PLAN & PROFILE



NOTE: STORMCEPTOR STC 900 DETAIL IS LOCATED ON SHEET 3A.



AS-BUILT (IN RED) BY CONCRETE EXPRESS, INC.

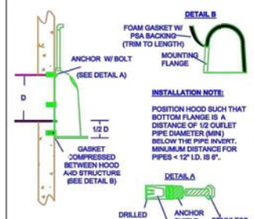


NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER SP-SN	

WATER QUALITY HOOD DETAIL
N.T.S.

APPROVED: _____ _____ 3396
CITY ENGINEER DATE JOB NUMBER

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PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PERCITY COMMENTS	08/22/2017	JJ1
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISIONS NO.1 GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:
COLORADO LICENSED
DAVID K. KEMP
03-15-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
STORM SEWER PLAN & PROFILE

PROJECT NO:
0010-1625
DRAWN BY:
OKK
DESIGNED BY:
OKK
SCALE:
1" = 30'
SUBMITTED ON:
05/01/2017

19 OF 21

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~~CONSTRUCTION PLANS~~ **RECORD DRAWINGS**

LEYDEN ROAD STREET IMPROVEMENTS

LEYDEN ROCK FILING NO. 1 TO ORION WAY

A PORTION OF SECTION 25 AND A PORTION OF SECTION 26
TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M.
CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 27 BEARS N 89°44'54" W AND MONUMENTED AS FOLLOWS:

- THE WEST QUARTER CORNER OF SECTION 27 BEING A FOUND 2" BRASS CAP MARKED "PLS 11434 1999 5881.08" IN 4"X4" SQUARE CONCRETE POST 1.4" BELOW GROUND LEVEL.
- THE CENTER QUARTER CORNER OF SECTION 27 BEING A FOUND NO. 6 REBAR W/ 3.25" ALUMINUM CAP MARKED "PLS 13258 1997" 0.2' ABOVE GROUND LEVEL.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

PUBLIC IMPROVEMENT QUANTITIES

STREET QUANTITIES

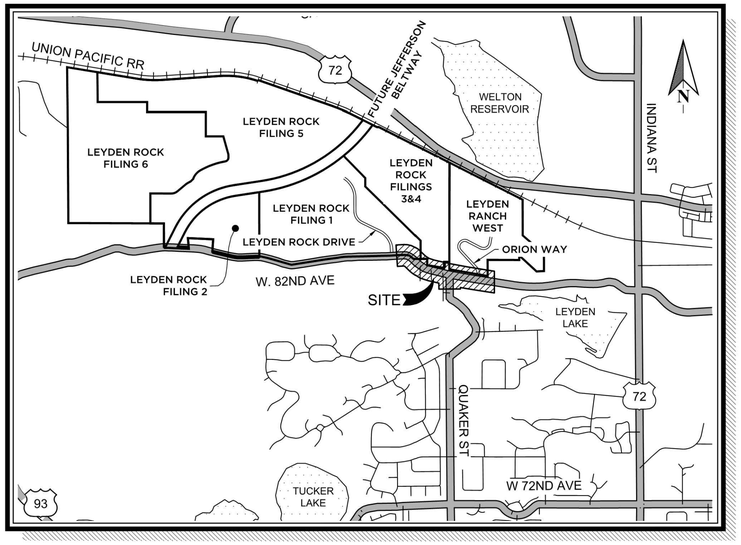
ITEM DESCRIPTION	CENTER LENGTH (LF)	PAVEMENT (SY)	VERTICAL CURB (LF)	SIDEWALK LENGTH (LF)	X-PANS (EA)
LEYDEN ROAD (WEST OF QUAKER)	897	2,864	1,691	1,218	0
LEYDEN ROAD (EAST OF QUAKER - NORTH SIDE)	463	1,253	425	0	0
LEYDEN ROAD (EAST OF QUAKER - SOUTH SIDE	1,270	1,925	1,072	719	1
QUAKER STREET	161	304	107	0	0

STORM SEWER QUANTITIES (LEYDEN ROAD WEST OF QUAKER STREET)

ITEM DESCRIPTION	QUANTITY	UNIT
30" RCP (CLASS III)	140	LF
30" RCP (CLASS IV)	55	LF
24"X38" HERCP (CLASS IV)	49	LF
19"X30" HERCP (CLASS IV)	138	LF
18" RCP (CLASS IV)	44	LF
18" RCP (CLASS III)	350	LF
(4) TYPE 16 INLET	1	EA
(4) TYPE 16 INLET W/ MODIFIED BOX	1	EA
10' TYPE R INLET	1	EA
TYPE C INLET	2	EA
STORMCEPTOR STC-900	1	EA
4' DIA. MANHOLE	4	EA
5' DIA. MANHOLE	2	EA
18" FES	2	EA

STORM SEWER QUANTITIES (LEYDEN ROAD EAST OF QUAKER STREET - SOUTH SIDE)

ITEM DESCRIPTION	QUANTITY	UNIT
36" RCP (CLASS III)	6	LF
18" RCP (CLASS III)	67	LF
5' TYPE R INLET (W/ WQ HOOD)	1	LF
10' TYPE R INLET	1	EA
STORMCEPTOR STC-900	1	EA
REMOVAL OF EXISTING 6' DIA. MANHOLE	1	EA



VICINITY MAP

1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET*
02	GENERAL NOTES SHEET
03	TYPICAL SECTIONS*
03A	TYPICAL SECTIONS AND DETAILS*
04	RIGHT-OF-WAY AND EASEMENTS 1
05	RIGHT-OF-WAY AND EASEMENTS 2
06	DEMOLITION & EXISTING UTILITY PLAN*
06A	OVERALL GRADING AND STORM PLAN*
~~07~~	~~DETAILED UTILITY PLAN~~ (SHEET REMOVED FROM SET)
08	EROSION CONTROL PLAN*
~~09~~	~~EROSION CONTROL PLAN~~ (SHEET REMOVED FROM SET)
10	EROSION CONTROL DETAILS
11	EROSION CONTROL DETAILS
12	SIGNING AND STRIPING PLAN*
13	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
14	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
15	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
16	ROADWAY PLAN AND PROFILE - QUAKER STREET
17	ROADWAY PLAN AND PROFILE - WEST TRAIL
18	CROSS SECTIONS - LEYDEN ROAD *
19	CROSS SECTIONS - LEYDEN ROAD *
20	CROSS SECTIONS - LEYDEN ROAD *
21	CROSS SECTIONS - LEYDEN ROAD *
22	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
23	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD
24	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
25	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
26	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD
27	DETAILS*
*	DENOTES REVISED SHEET BY KT ENGINEERING

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A-100
CENTENNIAL, CO 80112
PHONE: 303-770-9111

ENGINEER
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: KEN TOLAND, PE

FIRE PROTECTION
ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TIM HOOS, PE

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

- 5400 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- E — EXISTING ELECTRIC UTILITY LINE
- EXISTING UTILITY POLE
- EXISTING ELECTRICAL TRANSFORMER
- G — EXISTING GAS UTILITY LINE
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- 5400 — PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED BOUNDARY LINE
- PROPOSED CENTER LINE
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SETBACK
- 100 LF 8" SAN — PROPOSED SANITARY SEWER LINE
- SS STA: 1+00.00 — PROPOSED SANITARY SEWER SERVICE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UNDERDRAIN
- 100 LF 18" RCP — PROPOSED STORM SEWER LINE
- PROPOSED TYPE R INLET
- PROPOSED TYPE 16 INLET
- PROPOSED BOX BASE MANHOLE
- PROPOSED CIRCULAR MANHOLE
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- 100 LF 8" WAT — PROPOSED WATER LINE
- PROPOSED WATER SERVICE AND METER
- PROPOSED IRRIGATION SERVICE AND METER
- PROPOSED WATER GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED REDUCER
- PROPOSED BLOW-OFF
- PROPOSED BEND W/ THRUST BLOCK
- PROPOSED CROSS
- PROPOSED TEE
- PROPOSED AIR RELEASE VALVE
- PROPOSED PRESSURE REDUCING VALVE
- PROPOSED 100 YR WATER SURFACE ELEVATION
- PROPOSED FLOWLINE SWALE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
COVER SHEET

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

01 OF 27

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-CVR.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

RECORD DRAWINGS CERTIFICATION STATEMENT:

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COLORADO REGISTERED PROFESSIONAL ENGINEER 11/21/17 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

MAJOR COLLECTOR

LEYDEN ROAD THROUGH TOWN OF LEYDEN (STA 141+00 - 148+27.16)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

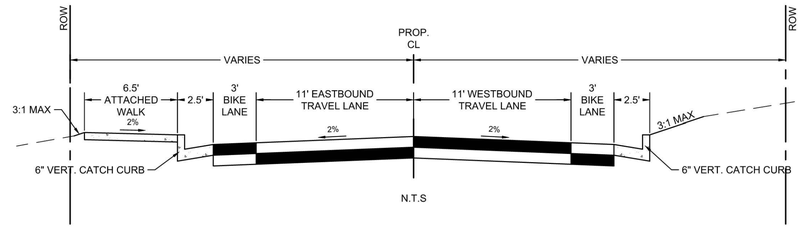
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD THROUGH TOWN OF LEYDEN (STA 148+27.16 - 149+68.96)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

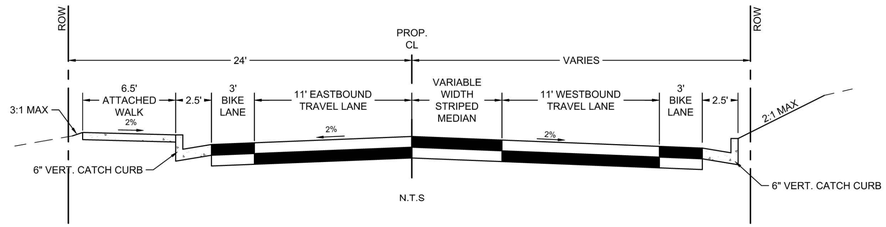
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD EAST OF QUAKER STREET (STA 150+58.46 - 153+00.50)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

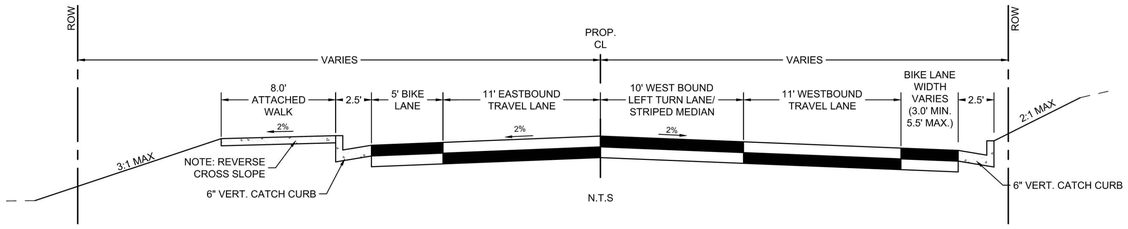
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD EAST OF QUAKER STREET (STA 153+37.78 - 154+36.07)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

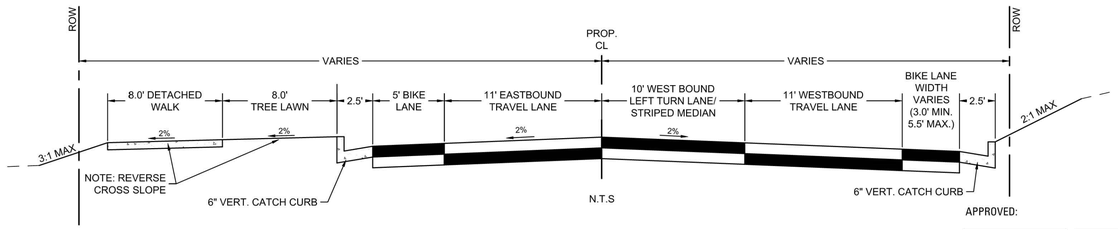
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
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7.			
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STAMP:

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
TYPICAL SECTIONS

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

J:\2018\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-TYP-SECT.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

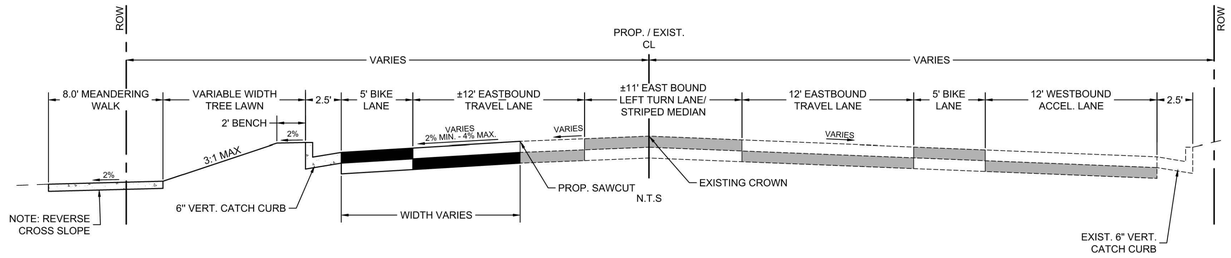
LEYDEN ROAD WEST OF ORION WAY (STA 155+81.39 - 157+32.81)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

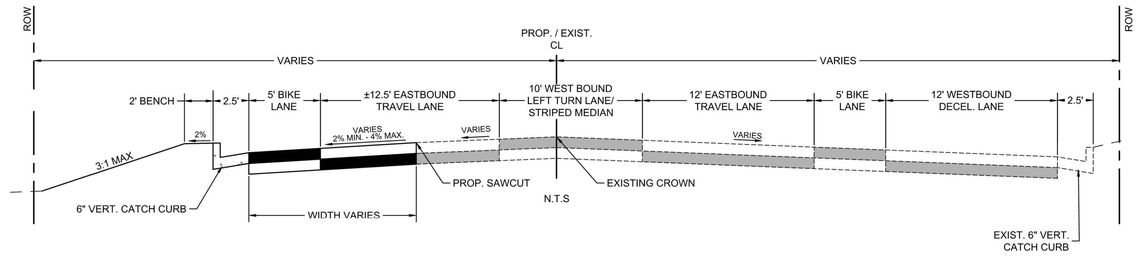
LEYDEN ROAD EAST OF ORION WAY (STA 158+40.02 - 159+30.14)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

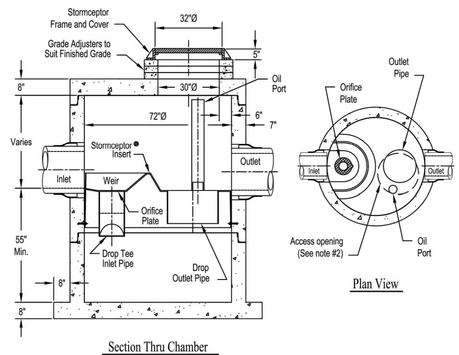
K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



Rinker MATERIALS

Concrete Pipe Division

STC 900 Precast Concrete Stormceptor ®
(900 U.S. Gallon Capacity)



Section Thru Chamber

Plan View

Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 028

STORMCEPTOR STC-900 DETAIL
N.T.S.

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
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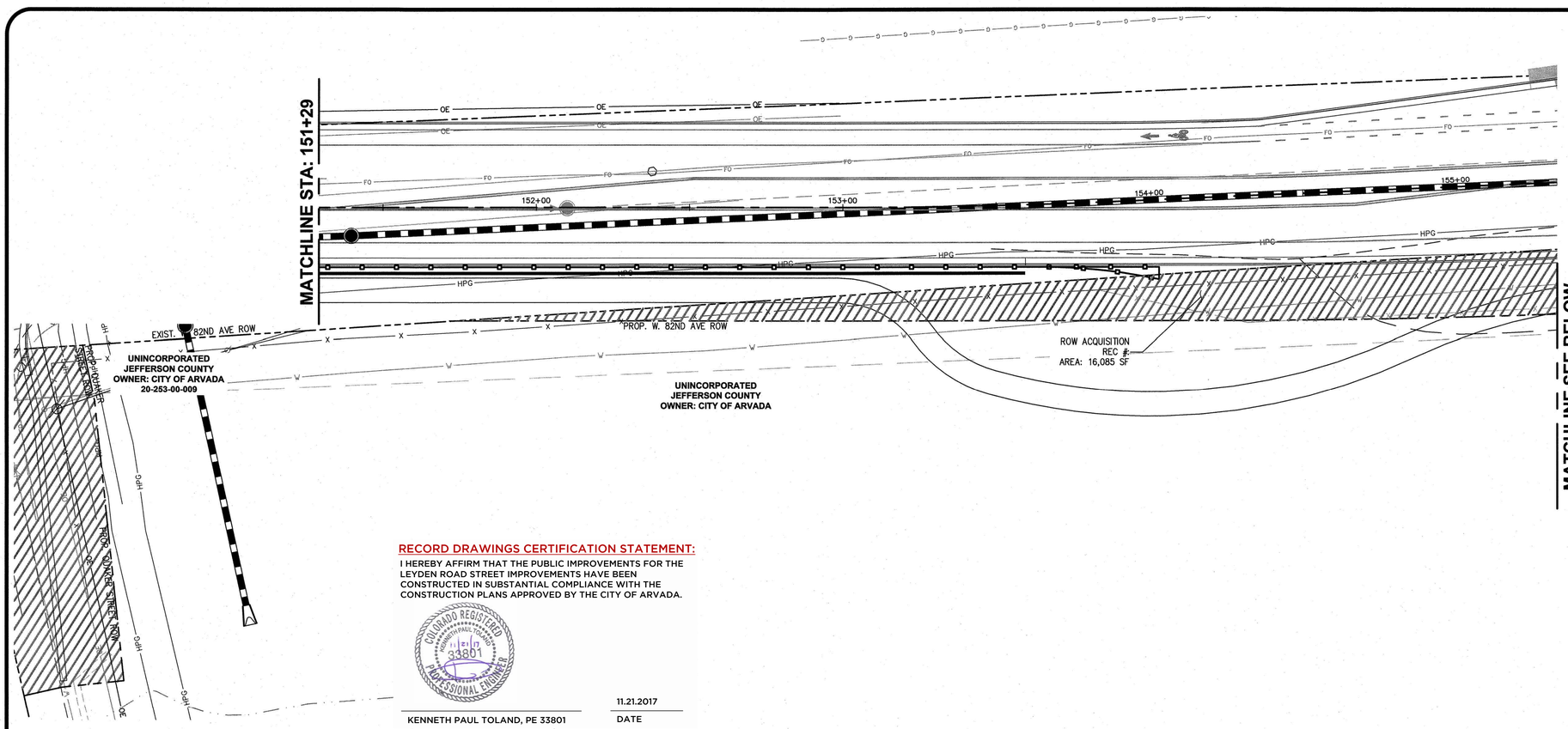
6.			
7.			
8.			

STAMP:

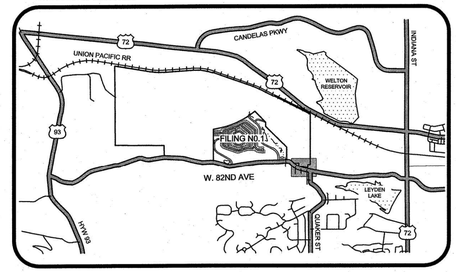
SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
TYPICAL SECTIONS AND DETAILS

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

J:\2020\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-TYP-SECT.dwg



JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 20' HORIZ.

LEGEND

- TEMPORARY GRADING AND PERMANENT UTILITY EASEMENT
- ROW ACQUISITION

RECORD DRAWINGS CERTIFICATION STATEMENT:

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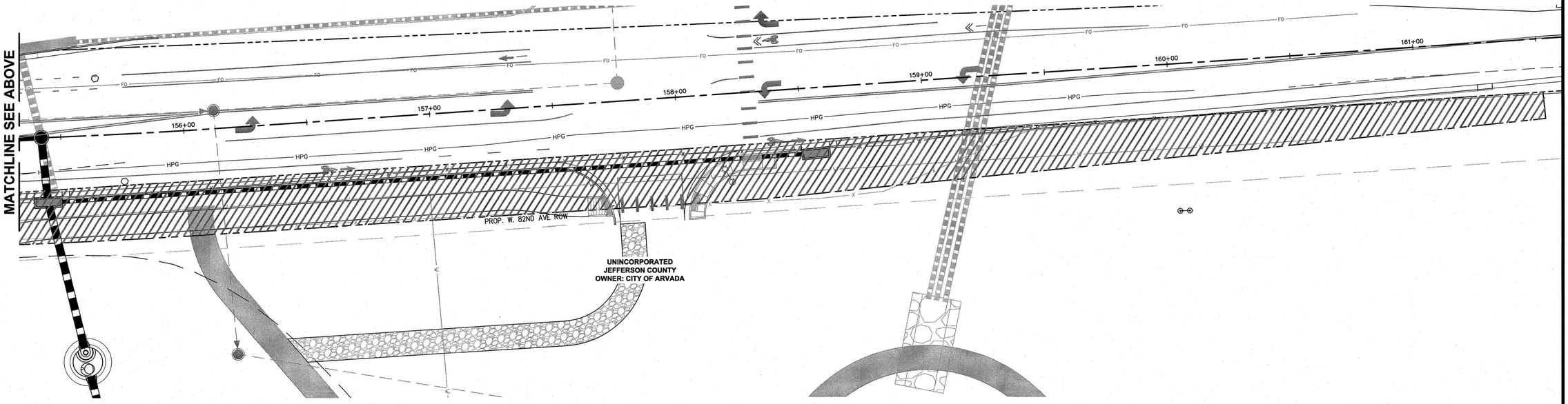
COLORADO REGISTERED PROFESSIONAL ENGINEER KENNETH PAUL TOLAND 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE



APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER MARK F. BISHOP 26988 4/7/15

JEHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
RIGHT OF WAY & EASEMENTS 2
prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 2036-213-110-LEYDEN-ROAD.dwg
APPROVED BY:

JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 20'
SHEET NO: 5 OF 27

UTILITY LEGEND

W	EXISTING WATER LINE
S	EXISTING SANITARY LINE
FO	EXISTING FIBER OPTIC
HPG	EXISTING HIGH PRESSURE GAS
G	EXISTING GAS
	EXISTING STORM LINE
	PROPOSED STORM LINE

EXISTING UTILITY NOTE

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES WITHIN THE WORK AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR AN DAMAGE AT HIS EXPENSE.

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES, DRAINAGE CHANNELS, AND ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION

STM 2-2 (4' DIA MH)
STM 2-1 (18" FES)
18" RCP
STM-2 ALIGNMENT (SEE SHEET 23)
CITY OF ARVADA 20-264-06-001
18" RCP
STM 6-3 (10' TYPE R)
STM 2-3 (TYPE C INLET)
NOT CONSTRUCTED AT THIS TIME
RUNOFF DIVERSION CHANNEL (SEE SECTION A-A)
18" RCP
STM-6 ALIGNMENT (SEE SHEET 26)
18" RCP
STM 6-2 (4' DIA MH-FLAT TOP)
STM 6-1 (18" FES)
W. 82ND AVENUE AKA LEYDEN ROAD
ANTHONY F. GUIDA JR. 16805 W. 82ND AVE 20-264-00-003
ELIZABETH D. WIELAND 16595 W. 82ND AVE 20-264-00-002
CITY OF ARVADA 20-264-06-009
HELEN B. SHEPHARD 16455 W. 82ND AVE 20-264-00-001
CITY OF ARVADA 20-274-00-004
NOT CONSTRUCTED AT THIS TIME
FREDERICK J. PATTRIDGE 20-264-00-006
RRCEA, LLC 20-264-00-009
RUNOFF DIVERSION CHANNEL (SEE SECTION B-B)
LEYDEN WATER DISTRICT 8183 3RD AVE 20-264-04-006
3RD AVE
ALLEY
DANIEL M. HAYES 8182 3RD AVE 20-264-99-001
DANIEL M. HAYES 8187 2ND AVE 20-264-03-005
2ND AVE
DANIEL M. HAYES 8186 2ND AVE 20-264-02-010
ALLEY
SHIRLEY A. SNYDER 8175 1ST AVE 20-264-02-009
1ST AVE
TAYLOR MORRISON OF COLORADO, INC. 20-253-00-001
STM 3.8 (TYPE C INLET)
STM 1.6 (5' DIA FLAT TOP MH)
STM 1.7 (4) TYPE 16 (INLET)
STM 3.7 (4' DIA. FLAT TOP MH)
19"X30" HERCP
24"X38" HERCP
STM-3 ALIGNMENT (SEE SHEET 24)
STM 1.5 (4) TYPE 16 INLET W/ MODIFIED BOX)
STM 1.4 (5' DIA FLAT TOP MH)
HAROLD BAKER, PENELOPE BAKER, ET. AL. 8171 QUAKER ST 20-264-01-001
STM 1.3 (4' DIA MH)
STM-1 ALIGNMENT (SEE SHEET 22)
ROAD IMPROVEMENTS WITHIN HATCHED AREA WILL BE AS-BUILT PER THE LEYDEN ROAD STREET IMPROVEMENTS - QUAKER STREET TO ORION WAY PLAN SET.
100-YR FLOODPLAIN PER THE LEYDEN CREEK MAJOR DRAINAGEWAY PLAN DATED OCTOBER 2015
30" RCP
STM 1.2 STORMCEPTOR STC-900
30" RCP
CUT 30" PIPE INTO EXIST. HEADWALL
LEYDEN CREEK
EXIST. 72" CMP
CITY OF ARVADA 20-253-00-009
MATCHLINE SEE BELOW
MATCHLINE ABOVE

2H:1V DAYLIGHT
EXISTING GROUND LINE
4H:1V
1.5'
4H:1V
3H:1V
WIDTH VARIES
6'
1.0'
6'
2'W BENCH

SECTION A-A
N.T.S.

3H:1V DAYLIGHT
EXISTING GROUND LINE
4H:1V
1.5'
4H:1V
2%
WIDTH VARIES
6'
1.5'
6'
4'W BENCH

SECTION B-B
N.T.S.

TAYLOR MORRISON OF COLORADO, INC. 20-253-00-001
EXIST. STM 4.5 (30" TYPE R INLET) (TO REMAIN)
ORION WAY
STM-4 ALIGNMENT (SEE SHEET 25)
EXIST. 36" RCP (TO REMAIN)
EXIST. STM 4.4 (6' DIA MH) (TO BE REMOVED)
TAYLOR MORRISON OF COLORADO, INC. 20-253-10-050
STM 4.3 (10' TYPE R) (PLACE IN LINE W/ EXISTING PIPE)
W. 82ND AVENUE AKA LEYDEN ROAD
EXIST. 18" RCP (TO REMAIN)
STM 4.2 STORMCEPTOR STC-900 (PLACE IN LINE W/ EXISTING PIPE)
STM 5.2 (5' TYPE R INLET)
16" RCP
STM-5 ALIGNMENT (SEE SHEET 25)
EXIST. LEYDEN RANCH WEST POND OUTFALL
EXIST. STM 4.1 (36" FES)
STM 5.1 (18" FES)
TAYLOR MORRISON OF COLORADO, INC. 20-253-10-050
OF ARVADA 253-00-009
ROAD IMPROVEMENTS WITHIN HATCHED AREA WILL BE AS-BUILT PER THE LEYDEN ROAD STREET IMPROVEMENTS - QUAKER STREET TO ORION WAY PLAN SET.

50 0 25 50 100
SCALE: 1"= 50' HORIZ.

N

APPROVED:

CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 | 11.21.2017 DATE

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-01\RL-GRD.dwg

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR: LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1			
2			
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4			
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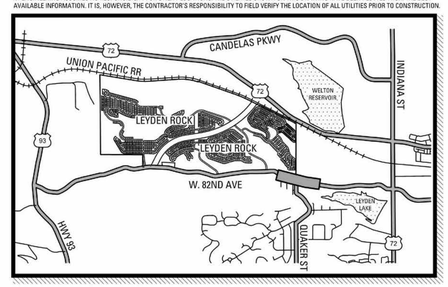
STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
OVERALL GRADING AND STORM PLAN

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 50'
SUBMITTED ON: 04/19/2017

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
NTS

30 0 15 30 60
SCALE: 1"= 30' HORIZ.

SIGNAGE LEGEND

SYMBOL	SIGN DETAILS
BL	R3-17 BIKE LANE 24"X 18" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	R3-17BP "ENDS" PLAQUE 24"X 8" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	W16-2AP DISTANCE PLAQUE "200 FT" 24"X12" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
ST	R1-1 STOP 30"X30" BACKGROUND:4090 (3M-WHITE DIAMOND GRADE) OR EQUIVALENT FOREGROUND: 1172 (3M-RED EC FILM) OR EQUIVALENT
PW	W11-2 PEDESTRIAN WARNING 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
RT	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 30"X30" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
LA	W16-7PL LEFT ARROW PLAQUE 24" X 12" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
AH	W16-9P "AHEAD" PLAQUE 24"X 12" BACKGROUND: 4083 (3M-FYG*) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.

SIGNING AND STRIPING NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD OUTSIDE OF THE TOWN OF LEYDEN. THROUGH THE TOWN OF LEYDEN, THE POSTED SPEED LIMIT IS 30 MPH.
2. ALL EXISTING SPEED LIMITS SIGNS ARE TO BE RELOCATED.
3. ALL CROSSWALKS/LANE CONTROL ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE WATER BASED PAINT. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND PER CITY OF ARVADA STANDARDS AND SPECIFICATIONS. ALL SIGN POSTS TO BE INSTALLED PER ARVADA DETAIL TR-1.
5. LEYDEN ROAD STATIONING BASED ON THE PROPOSED CENTERLINE LEYDEN ROAD ALIGNMENT.
6. ALL EXISTING STREET SIGNS THROUGH THE TOWN OF LEYDEN WILL BE RELOCATED AFTER FINAL ROAD IMPROVEMENTS HAVE BEEN INSTALLED.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA DETAILS TR-3 AND TR-5.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-5.
9. INTERIM STRIPING IN LEYDEN RANCH WEST CONSTRUCTION PLANS BY CVL ARE NOT SHOWN ON THIS PLAN.
10. EXISTING STRIPING TO BE REMOVED AS NECESSARY.
11. CONTRACTOR SHALL COORDINATE WITH TRAFFIC ENGINEERING PRIOR TO INSTALLING ANY STRIPING ON LEYDEN ROAD.

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
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PREPARED FOR:
LRD INC.

REVISIONS:

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STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
SIGNING AND STRIPING PLAN

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

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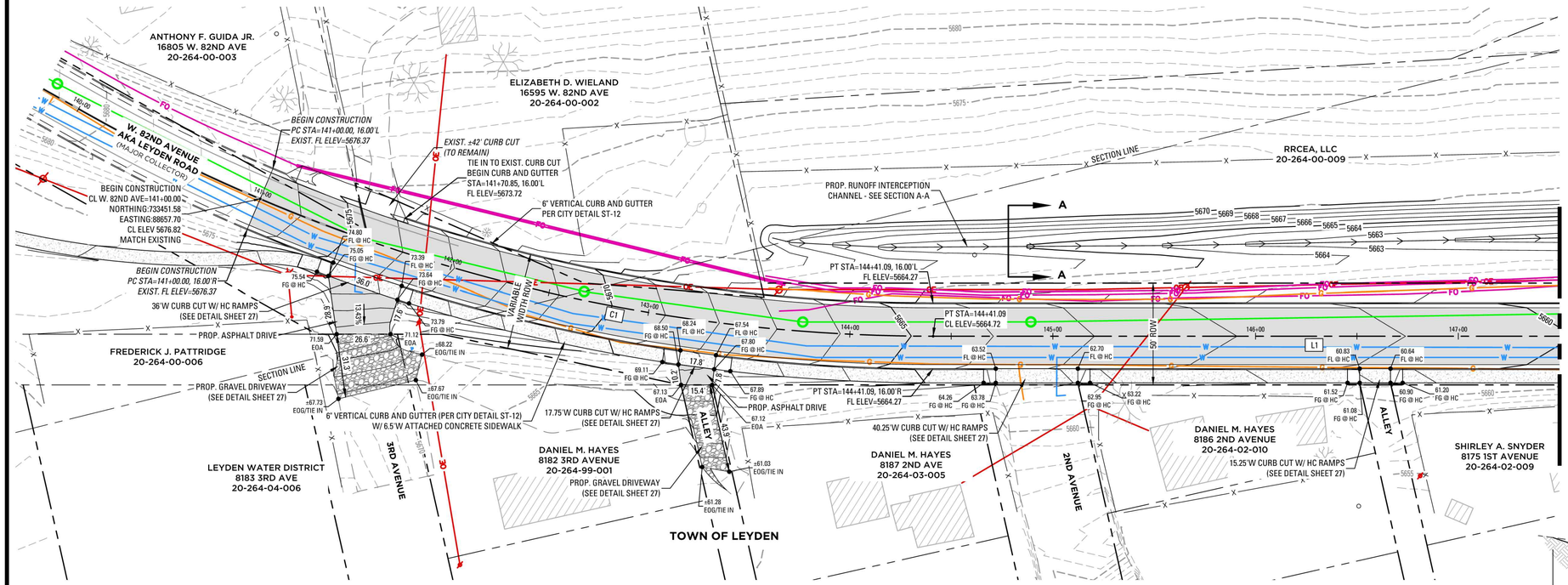
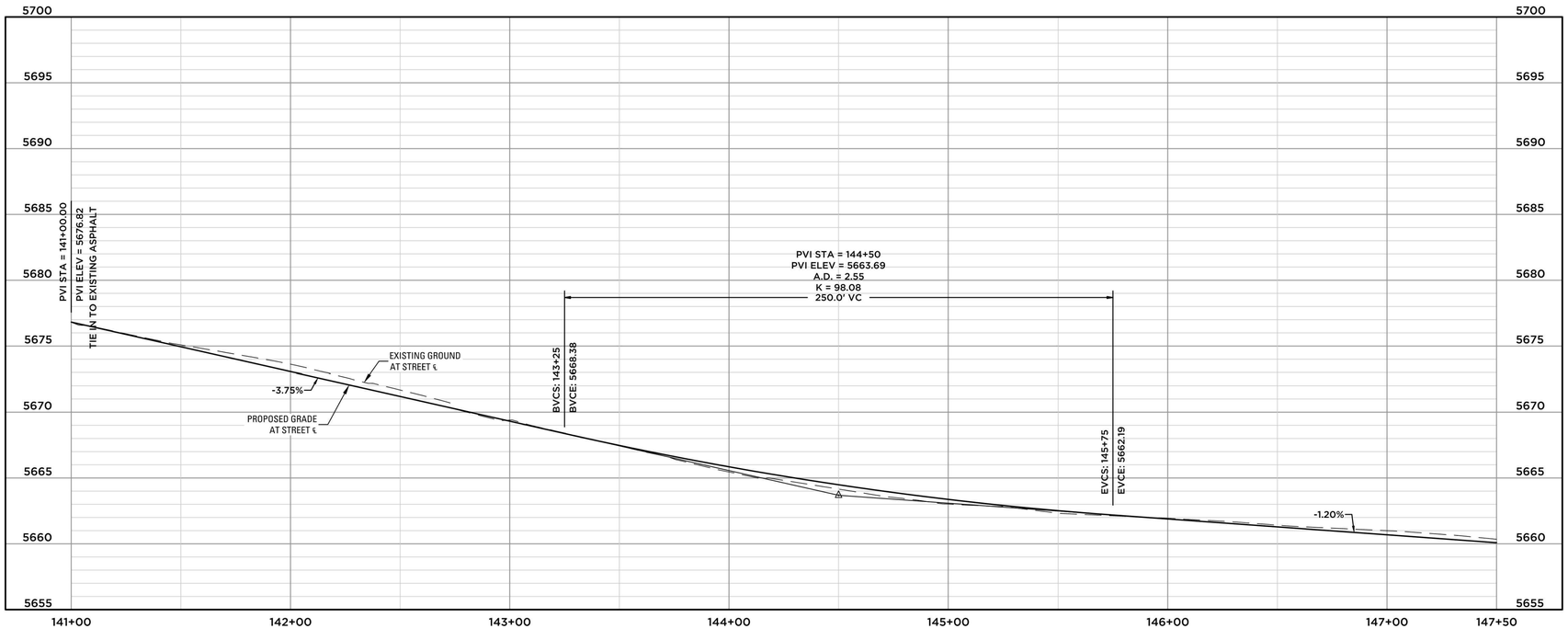
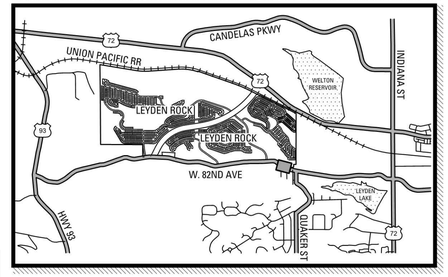
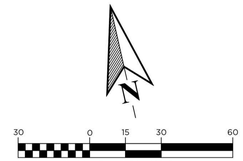


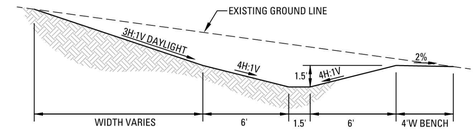
LEYDEN ROAD CENTERLINE PLAN & PROFILE





KEYMAP
NTS





SECTION A-A
N.T.S.

W. 82ND AVENUE CENTERLINE CURVE TABLE					
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	341.09'	850.00'	22°59'30"	S 65°46'09" E	338.81'

W. 82ND AVENUE CENTERLINE LINE TABLE		
LINE NO.	LENGTH	BEARING
L1	862.24'	S 77°15'55" E

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FLOWLINE (FL) UNLESS NOTED OTHERWISE.
3. ALL HANDICAP RAMPS SHALL CONFORM TO CURRENT CITY OF ARVADA STANDARDS.
4. CONTRACTOR SHALL COORDINATE ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION.

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COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

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P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
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STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 30'

SUBMITTED ON:
04/19/2017

13
OF 27

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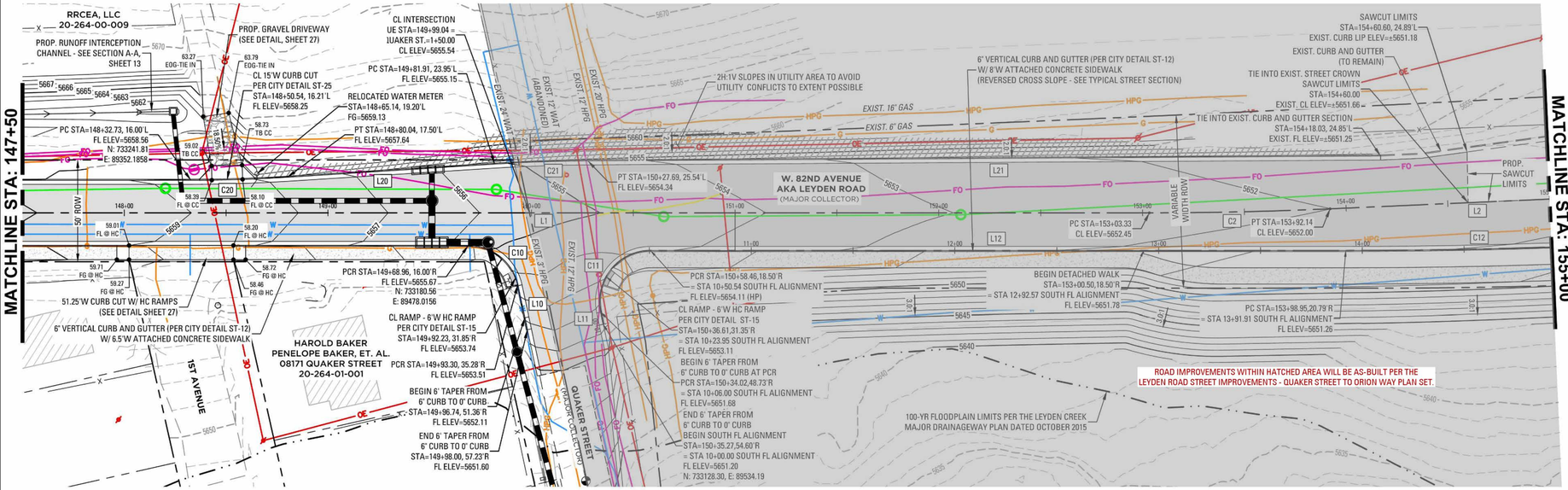

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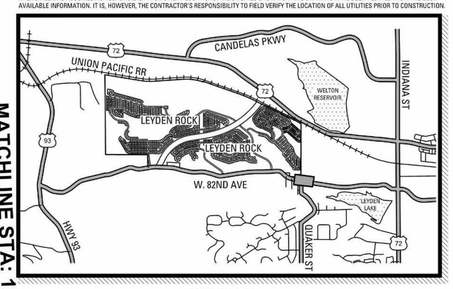

KEYMAP
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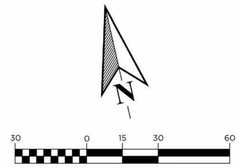
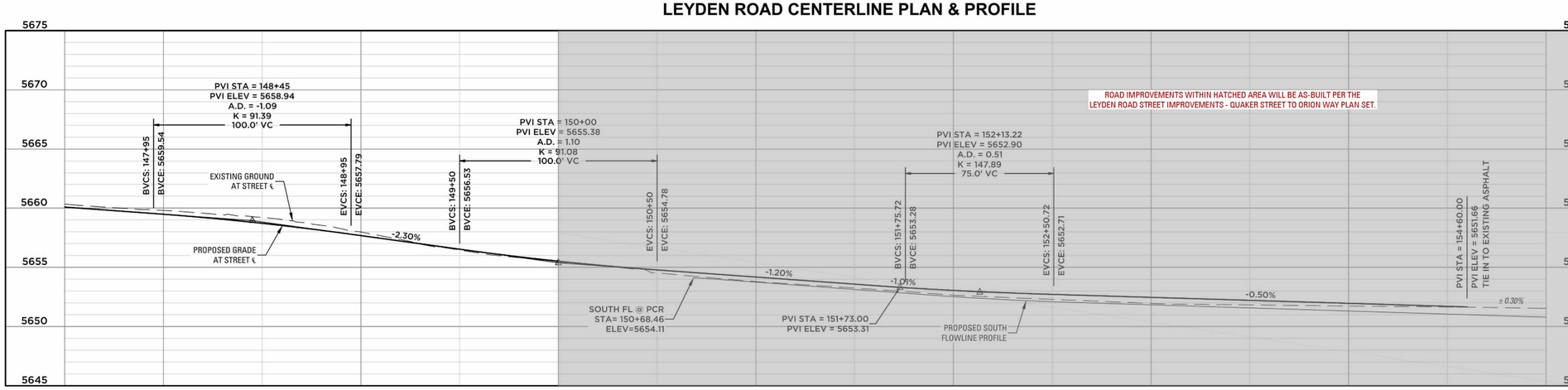
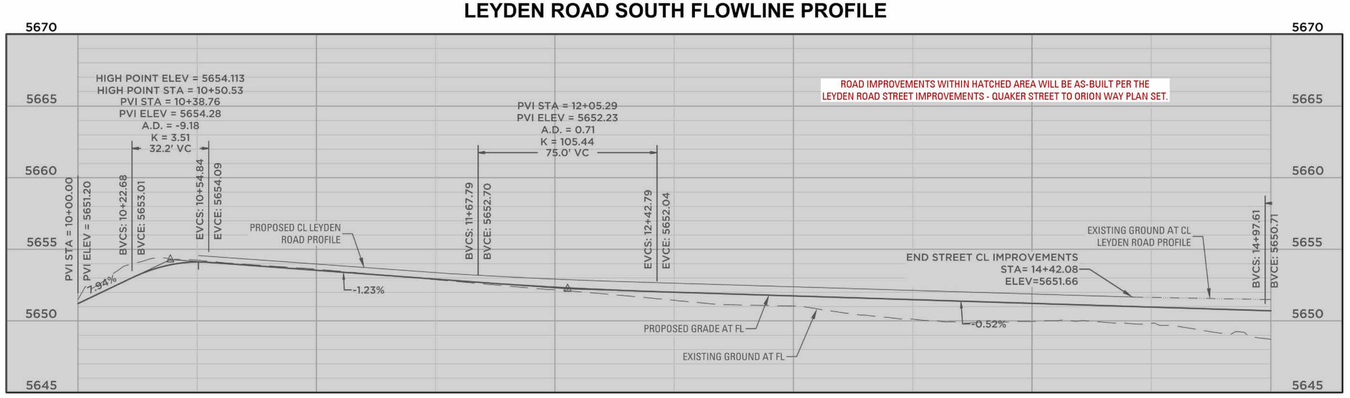


LEYDEN ROAD CENTERLINE PLAN & PROFILE



LEYDEN ROAD SOUTH FLOWLINE PROFILE



NOTES

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COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

W. 82ND AVENUE CENTERLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C2	88.82'	2000.00'	2°32'40"	S 78°32'15" E	88.81'

W. 82ND AVENUE CENTERLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L1	862.24'	S 77°15'55" E
L2	171.09'	S 79°48'35" E

W. 82ND AVENUE SOUTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C10	33.50'	25.00'	76°46'56"	S 38°52'27" E	31.05'
C11	44.54'	25.00'	102°04'18"	N 51°41'56" E	38.88'
C12	185.41'	2967.00'	3°34'49"	S 79°03'19" E	185.38'

W. 82ND AVENUE SOUTH FLOWLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L10	22.44'	S 00°39'01" W
L11	6.00'	N 00°39'47" E
L12	341.37'	S 77°15'55" E

W. 82ND AVENUE NORTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C20	47.34'	748.00'	03°37'35"	S 79°04'42" E	47.34'
C21	45.81'	802.00'	3°16'23"	S 79°15'19" E	45.81'

W. 82ND AVENUE NORTH FLOWLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L20	102.07'	S 80°53'30" E
L21	389.19'	S 77°37'07" E

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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PREPARED FOR:
LRD INC.

REVISIONS:

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STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

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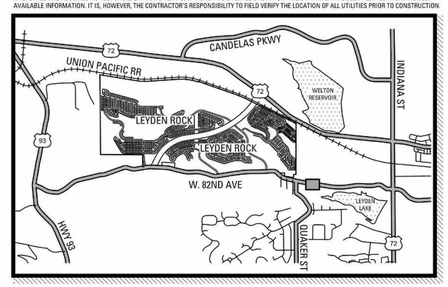

KEYMAP
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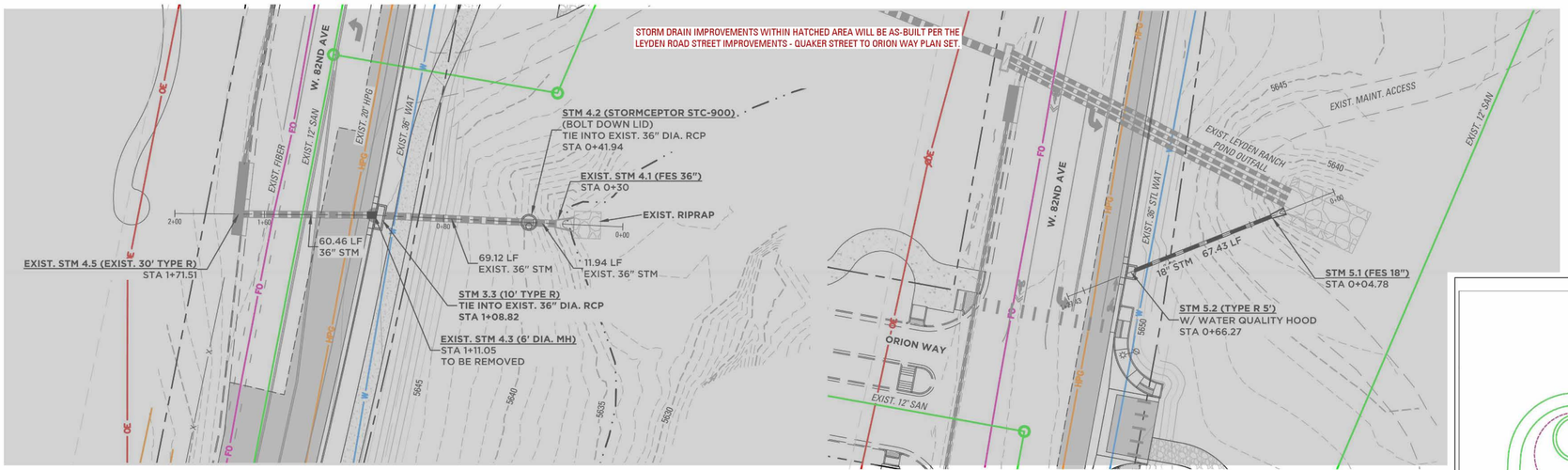
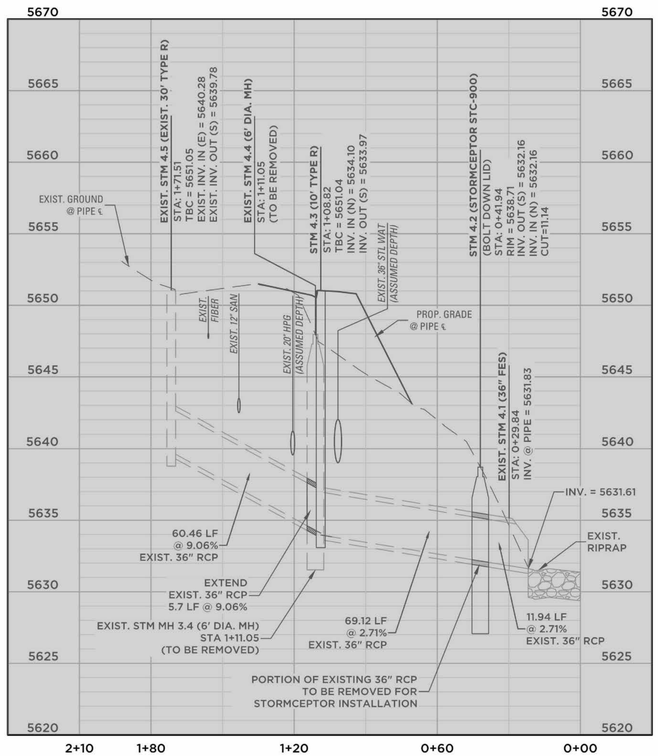
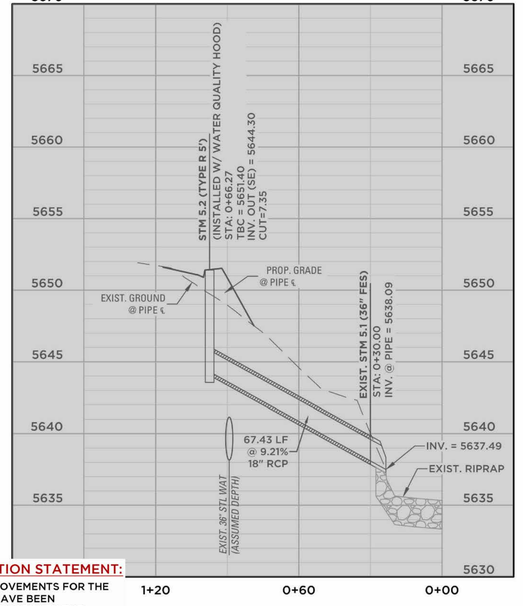


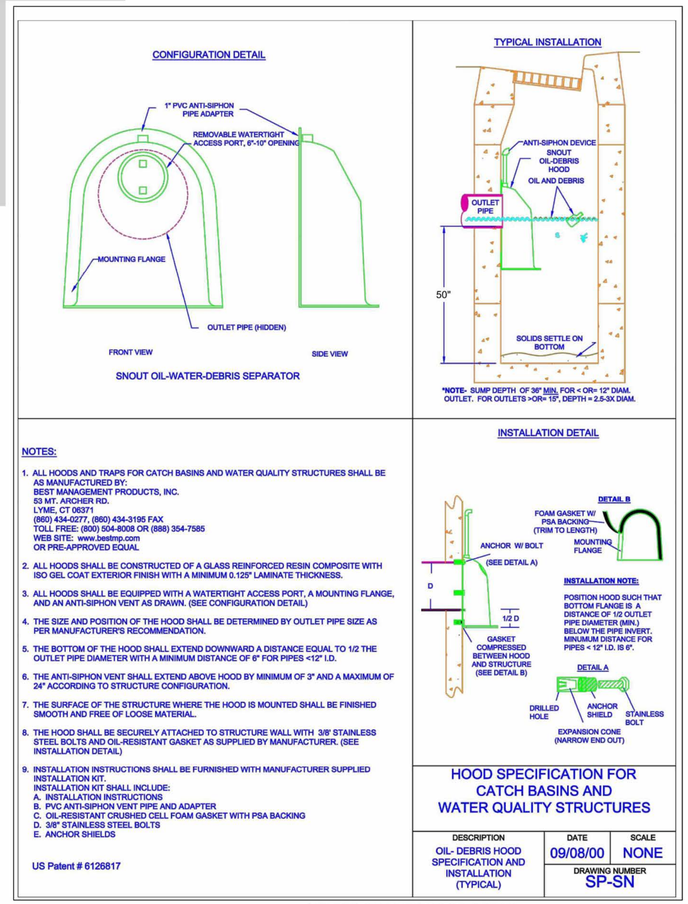
STORM 3 PLAN & PROFILE



NOTE: STORMCEPTOR STC 900 DETAIL IS LOCATED ON SHEET 3A.

STORM 4 PLAN & PROFILE





NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	SP-SN

WATER QUALITY HOOD DETAIL
N.T.S.

RECORD DRAWINGS CERTIFICATION STATEMENT:

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

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3.			
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5.			
6.			
7.			
8.			

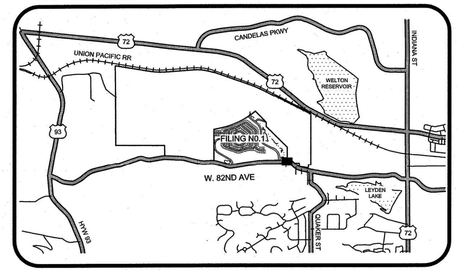
STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
STORM SEWER PLAN & PROFILE

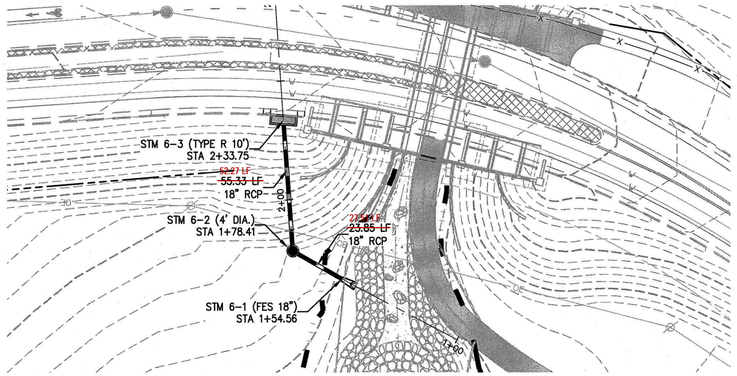
PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

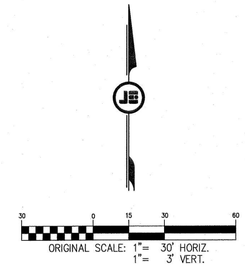
J:\2016\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1605-STORM-PP-02.dwg

JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



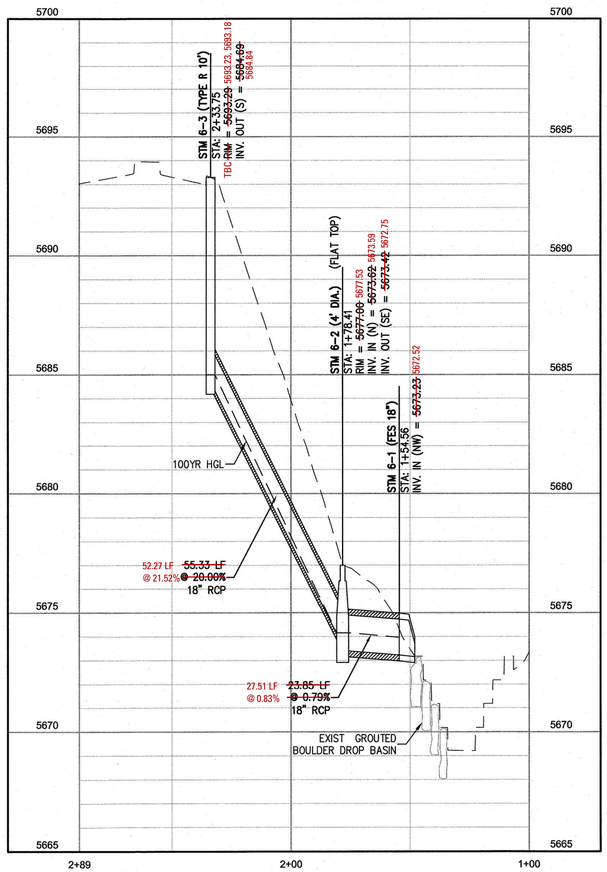
KEYMAP
N.T.S.





ORIGINAL SCALE: 1"= 30' HORIZ.
1"= 3' VERT.

STM-6 PLAN & PROFILE



RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801

11.21.2017
DATE

APPROVED:

CITY ENGINEER DATE 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

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Dig Safely. 1-800-922-1987
www.iuncc.org
for marking of underground member utilities.

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REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER
NAME E. BINDING
26988
4/7/15

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 428-8036 FAX: (303) 467-8488

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
STORM PLAN AND PROFILE
LEYDEN ROAD 5
prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 3110-STM-TOL1-2.dwg
APPROVED BY:
JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 30'
SHEET NO: 26 OF 27

J:\2036\213-110\CDR\CONSTRUCTION\3110-STM-TOL1-2.dwg

LEYDEN ROCK

FILING 1 CONSTRUCTION PLANS - AMENDMENT SET

AS-BUILTS

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19, T2S, R69W, 6TH P.M. CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

LEGAL DESCRIPTION:

A PORTION OF WHEAT RIDGE GARDENS 2ND FILING AND A PORTION OF SECTION 26, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE ASSUMPTION THAT THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26 BEARS N 00°07'27" W AND MONUMENTED AS FOLLOWS:

-THE WEST QUARTER CORNER OF SECTION 26 BEING A 1" O.D. IRON PIPE w/ 3-1/4" ALUMINUM CAP, P.L.S. 13258, 1996.

-THE NORTHWEST CORNER OF SECTION 26 BEING A 1" O.D. IRON PIPE w/ 3-1/4" ALUMINUM CAP, P.L.S. 13155, 1998.

BEGINNING AT THE WEST QUARTER CORNER OF SECTION 26, SAID POINT ALSO BEING ON THE WEST LINE OF THAT PARCEL OF LAND RECORDED AT RECEPTION NUMBER 93184796;

THENCE N 00°07'27" W ALONG THE WEST LINE OF SAID PARCEL OF LAND AND THE WEST LINE OF SAID NORTHWEST QUARTER OF SECTION 26, A DISTANCE OF 886.24 FEET;

THENCE N 81°17'35" E A DISTANCE OF 116.85 FEET TO A POINT OF TANGENT CURVE;

THENCE ALONG THE ARC OF A CURVE TO THE LEFT WITH A RADIUS OF 4650.00 FEET, A CENTRAL ANGLE OF 30°41'03", AN ARC LENGTH OF 2490.26 FEET, THE CHORD OF WHICH BEARS N 65°57'04" E, A DISTANCE OF 2460.61 FEET;

THENCE S 39°23'28" E, A DISTANCE OF 72.00 FEET;

THENCE S 44°13'49" E, A DISTANCE OF 797.08 FEET;

THENCE S 00°06'05" E, A DISTANCE OF 235.26 FEET;

THENCE S 45°27'48" E, A DISTANCE OF 2153.85 FEET;

THENCE S 00°07'34" E A DISTANCE OF 510.84 FEET TO THE NORTHEAST CORNER OF A PARCEL OF LAND RECORDED AT RECEPTION NUMBER 2008057269;

THENCE N 89°59'21" W ALONG THE NORTHERLY LINE OF SAID PARCEL OF LAND A DISTANCE OF 192.09 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF LEYDEN ROAD AS SHOWN AND DESCRIBED ON AN ALTA/ACSM SURVEY RECORDED AT RECEPTION NUMBER 2006091141;

THENCE ALONG SAID SHOWN AND DESCRIBED NORTHERLY RIGHT-OF-WAY LINE OF LEYDEN ROAD THE FOLLOWING THIRTEEN (13) COURSES;

1. N 50°37'02" W A DISTANCE OF 142.60 FEET;
2. N 80°20'50" W A DISTANCE OF 111.05 FEET;
3. S 88°49'37" W A DISTANCE OF 213.40 FEET;
4. S 85°55'05" W A DISTANCE OF 165.62 FEET;
5. S 87°17'34" W A DISTANCE OF 80.21 FEET;
6. S 88°34'48" W A DISTANCE OF 706.38 FEET;
7. S 88°41'35" W A DISTANCE OF 508.25 FEET;
8. S 84°11'05" W A DISTANCE OF 119.15 FEET;
9. S 79°45'40" W A DISTANCE OF 100.50 FEET;
10. S 82°43'02" W A DISTANCE OF 293.16 FEET;
11. S 81°03'36" W A DISTANCE OF 1021.03 FEET;
12. N 74°03'50" W A DISTANCE OF 673.54 FEET;
13. N 77°04'06" W A DISTANCE OF 254.14 TO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 26;

THENCE N 00°08'12" W ALONG THE WEST LINE OF SAID SOUTHWEST QUARTER OF SECTION 26, A DISTANCE OF 900.72 FEET TO THE POINT OF BEGINNING;

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 8,737,714 SQUARE FEET OR 200.5903 ACRES, MORE OR LESS.

BASIS OF BEARING:

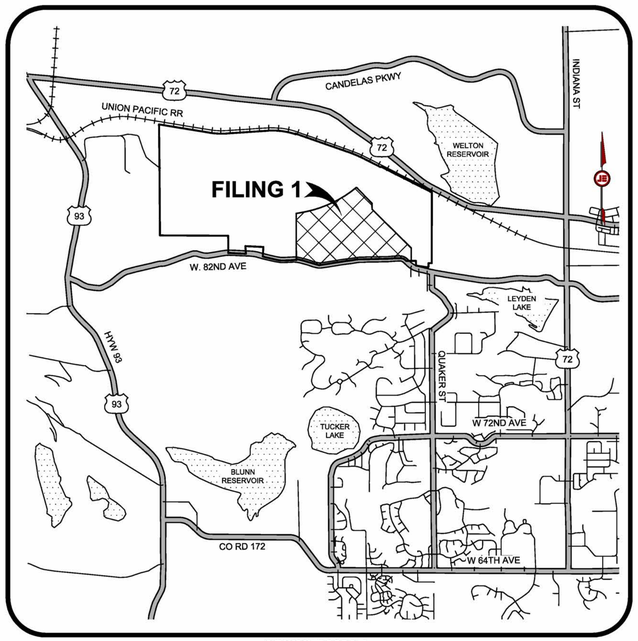
SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 27, TOWNWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M. BEARS N 89 DEGREES 44 MINUTES 54 SECONDS W

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS–DREXEL GROUP ALTA/ACSM SURVEY 7–21–06

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.



VICINITY MAP

NTS

SHEET INDEX:

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★★★ ★ 1	COVER SHEET
2	NOTES SHEET
3	TYPICAL SECTIONS
★★ 4	PUBLIC IMPROVEMENT QUANTITIES
★★★ 5	OVERALL UTILITY PLAN
★ 6	OVERALL GRADING PLAN
★ 7	ROAD PHASING PLAN
★★ 8	GRADING AND UTILITY PHASING PLAN
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9	OVERLOT TYPICAL SECTIONS
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★ 11	LOT GRADING 2
12	LOT GRADING 3
13	LOT GRADING 4
14	YULE WAY GRADING
15	TERRY WAY GRADING
	SIGNAGE & STRIPING
16	LEYDEN ROAD
17	LEYDEN ROAD - EAST ENTRANCE INTERSECTION
18	LEYDEN ROAD - WEST ENTRANCE INTERSECTION
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	ROAD PLAN & PROFILE
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★★★ 28	YULE WAY - 4 ~ W 84TH AVE -1
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★ 31	W 84th AVE - 4
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★ 35	W 84TH DR - 4
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37	W 84TH DR - 6 ~ W 83RD PL -1
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★ 40	VIOLET CT - 1
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★ 42	VIOLET CT - 3
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★ 44	W 64TH PL -2 ~ W 83RD PL -2
★ 45	WILKERSON ST - 1
★ 46	WILKERSON ST - 2
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★ 73	W 84TH DR - 4
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75	W 83RD PL - 2
★ 76	W 83RD PL - 3
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90	STM 10-1 & 4
★ 91	STM 10-2
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★ 98	STM 20-1 & 31
★ 99	STM 20-2 & 23
★ 100	STM 20-3, 21 & 22
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★ 104	STM 27 - POND B
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★ AD-2	BARBARA GULCH LOW WATER CROSSING
★ AD-3	SANITARY SEWER PLAN & PROFILE - W. 85TH PL

★ = AMENDED SHEET

*** NUMBER OF ASTERISKS INDICATES NUMBER OF TIMES SHEET HAS BEEN AMENDED.**

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A–100
CENTENNIAL, CO 80112
PHONE: 303–770–9111

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A–135
CENTENNIAL, CO 80112
PHONE: 303–224–9520

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE: 720–898–7644
CONTACT: TIM HOOS

ENGINEER
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: KEN TOLAND

SURVEYOR
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: CHRIS MCELVAIN

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE: 303–245–2219
CONTACT: RON MORTINEZ

FIRE PROTECTION
ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001–0060
PHONE: 303–424–3012
FAX: 303–432–7995
CONTACT: STEVE STEIGLEDER

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT–OF–WAY
	PROPOSED SETBACK
	PROPOSED RIPRAP
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
S	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
100 LF 18" RCP	PROPOSED STORM SEWER LINE
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW–OFF
	PROPOSED GAS WELL HEAD
	PROPOSED WATERLINE PLUG FITTING WITH THRUST BLOCK
	PROPOSED WATERLINE ELBOW FITTING
TYPE C TYPE R	PROPOSED STORM SEWER INLET
	PROPOSED STORM SEWER FLARED END SECTION
	PROPOSED STORM SEWER MANHOLE
1.44 %	SLOPE PERCENTAGE AND DIRECTION

ABBREVIATIONS:

C&G	= CURB & GUTTER
℄ OR CL	= CENTER LINE
(106.2)	= EXISTING ELEVATION
FG	= FINISHED GRADE
℄ FL	= FLOW LINE
GB	= GRADE BREAK
HP	= HIGH POINT
INV	= INVERT ELEVATION
LP	= LOW POINT
ℙ OR PL	= PROPERTY LINE
106.02	= PROPOSED ELEVATION
ROW	= RIGHT–OF–WAY
TOC	= TOP OF CURB
TGB	= TOP OF GROUTED BOULDER
WALK	= FINISHED GRADE WALK
EOC	= EDGE OF CONCRETE
TOW	= TOP OF WALL
BOW	= BOTTOM OF WALL
AP	= ANGLE POINT
ESMT	= EASEMENT
EOA	= EDGE OF ASPHALT
EXIST.	= EXISTING
PROP.	= PROPOSED
HGL	= HYDRAULIC GRADE LINE

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ 3-8-12 3354
CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX (303) 467-0438

LEYDEN ROCK FILING 1

COVER SHEET

prepared for RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = NTS'
SHEET NO: 1 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set101-0054-F1-CVR-081014.dwg, 6/16/2015 11:00:31 AM

AS-BUILTS

TYPE	DESIGN INFORMATION	TYPICAL SECTION

MAJOR COLLECTOR

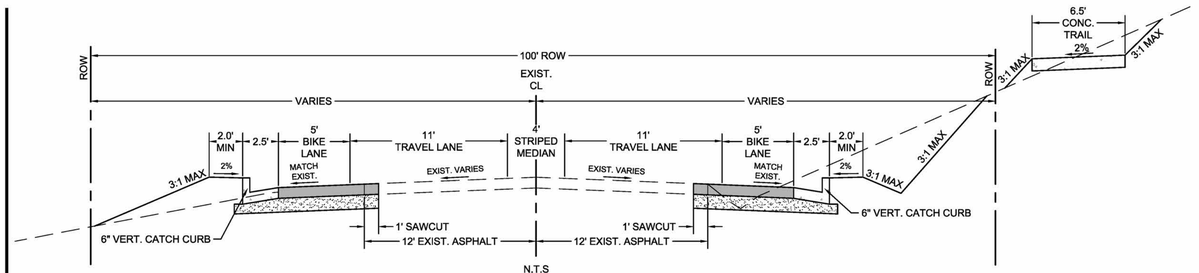
LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	NA	25' / 0.4' MIN FALL	NA

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	80
	SAG	70



NOTE: 1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT EACH LEYDEN ROCK ENTRANCE

MINOR COLLECTOR

(NO PARKING)

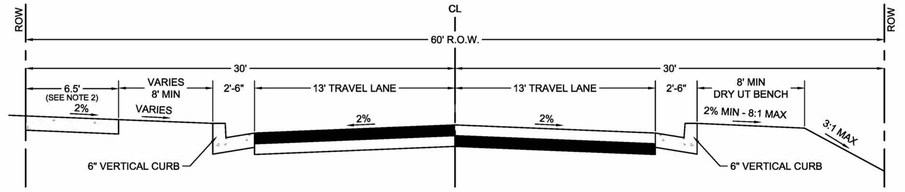
ROADS:
TERRY WAY
YULE WAY
W 84TH AVE

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES	40 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



NOTE: 1. SIDE IN WHICH WALK IS ON VARIES
2. WALK BECOMES 5' ON BOTH SIDES WHEN ADJACENT TO LOTS.

LOCAL

(PARKING BOTH SIDES)

ROADS:

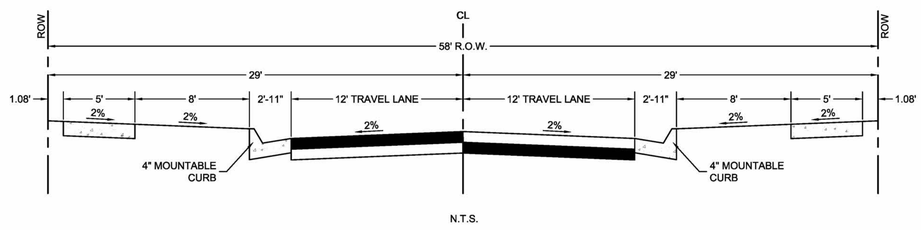
W 83RD PL, W 84TH DR, VIOLET COURT, W 83RD DR, W 84TH PL, WILKERSON CT, VIRGIL ST, WIER ST, W 83RD CR, W 84TH LN & W 85TH PL

ROW WIDTH	58.0'
TRAFFIC VOLUMES	<1000 ADT
POSTED SPEED	25 - 30 MPH
MINIMUM CENTERLINE RADIUS	150.0'
MINIMUM TANGENT BETWEEN CURVES	NA
MAXIMUM GRADE	8.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	4% FOR 35'	4% FOR 100'	4% FOR 200'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	18' / 0.3' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	35 MPH DESIGN	MINIMUM
	CREST	40
	SAG	50



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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED
PAUL D. JEHN
15-12
33801
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1

TYPICAL SECTIONS

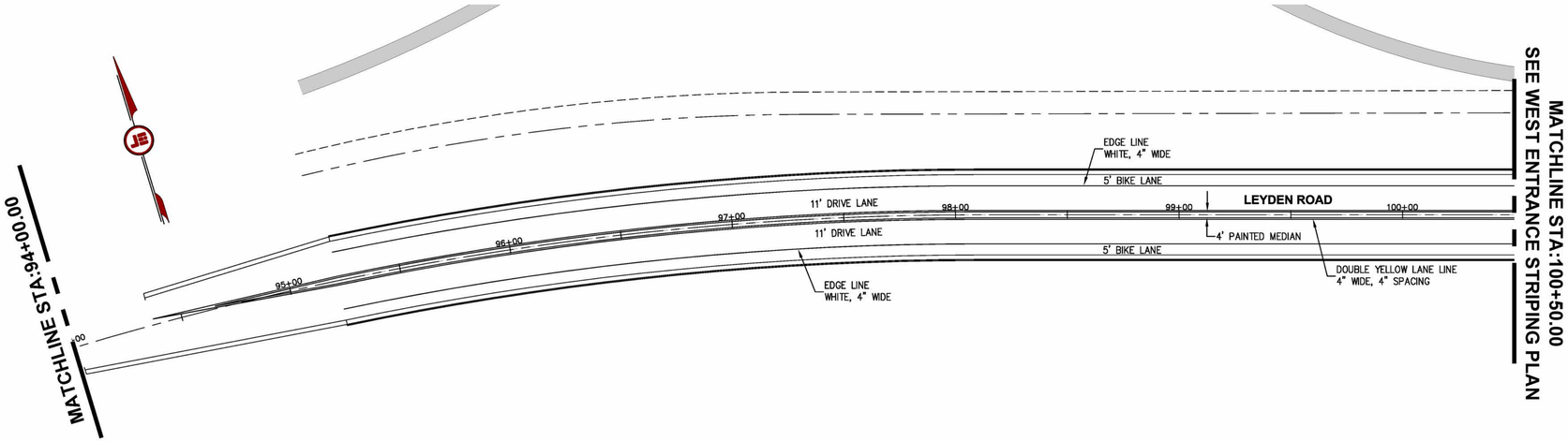
prepared for
RRCEA, LLC.

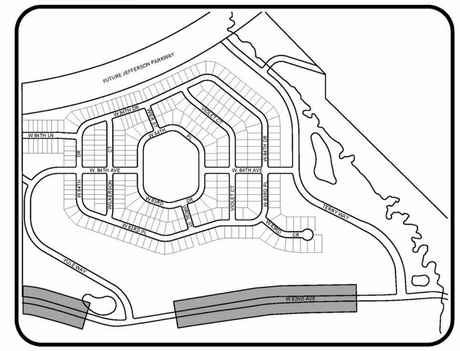
DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: T1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: NTS
SHEET NO: 3 OF 119

J:\2036\210-054\SUR\EYASBUILT\set\03-0054-F1-TYP SEC-081014.dwg, 6/16/2015 11:02:02 AM

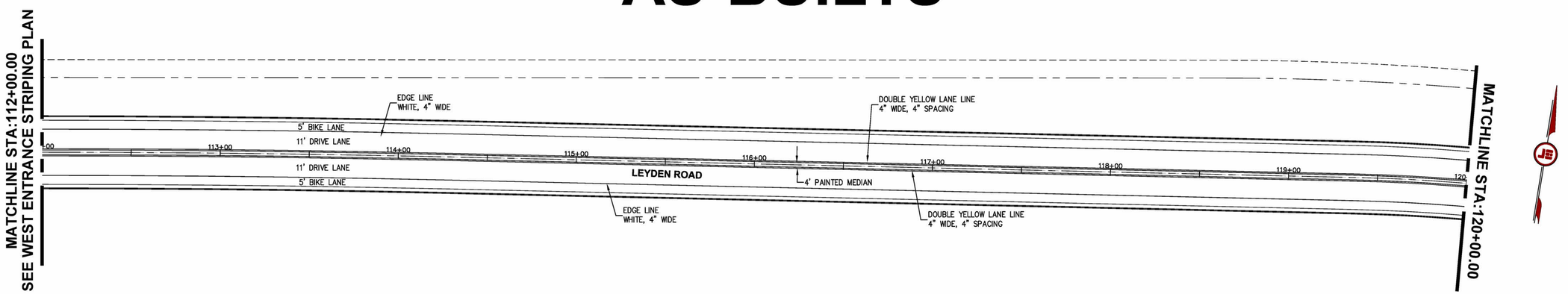
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

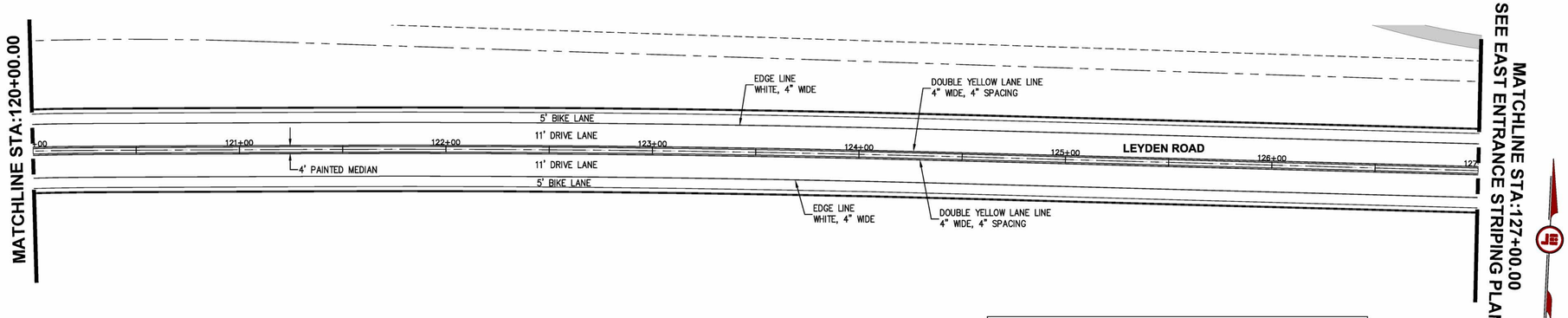




30 0 15 30 60
ORIGINAL SCALE: 1"= 30' HORIZ.

AS-BUILTS





NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL CROSSWALKS/LANE CONTROLLED ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-ES TAPE, INLAID WITH OVERLAY.
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6. ALL BICYCLE SYMBOLS AND BICYCLE ARROWS SHALL BE TO ARVADA'S SPECIFICATIONS AS SHOWN IN CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS DRAWING TR-2 THROUGH TR-7

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

COLORADO LICENSED 26988 PROFESSIONAL ENGINEER 6.12.15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ CITY ENGINEER — 3-8-12 DATE — 3354 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
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for marking of underground member utilities.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PAU

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD

prepared for
RRCEA, LLC.

DRAWN BY:	OKK
DESIGNED BY:	BSS
DRAWING NAME	F1-ASBUILTS
APPROVED BY:	
JOB NUMBER:	2036-210-054
DATE:	02/17/2012
SCALE:	1" = 30'
SHEET NO:	16 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\16-0054-F1-LR SIGNAGE 81014.dwg, 6/16/2015 11:32:47 AM

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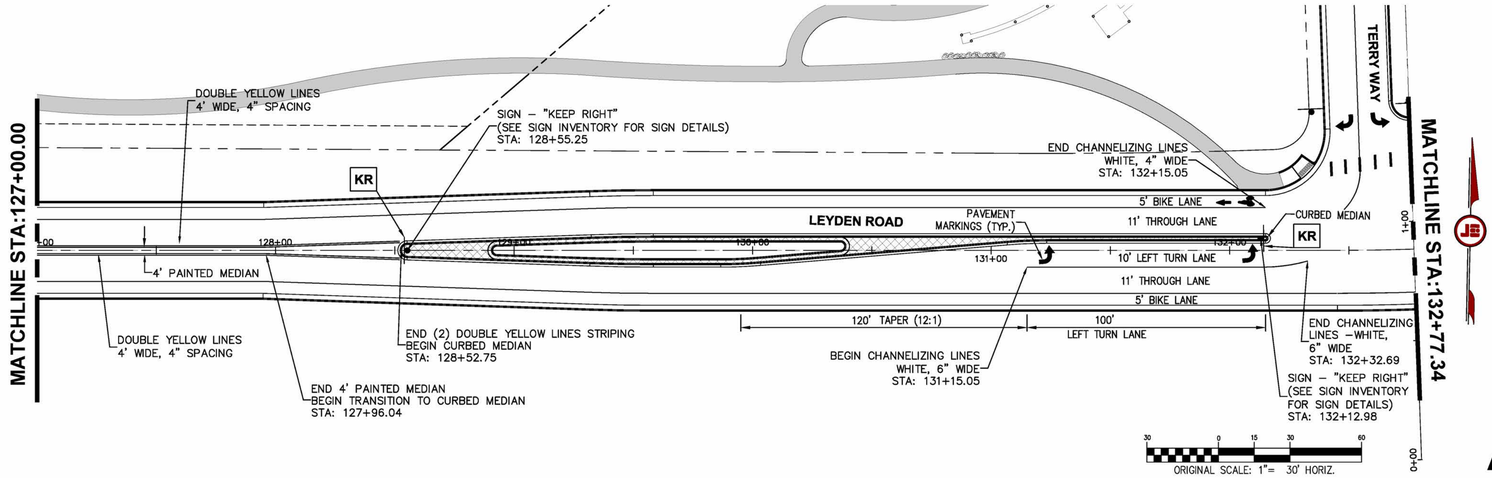
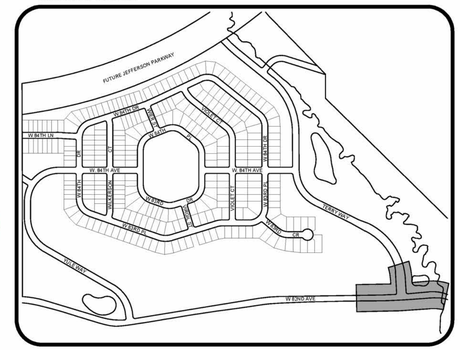
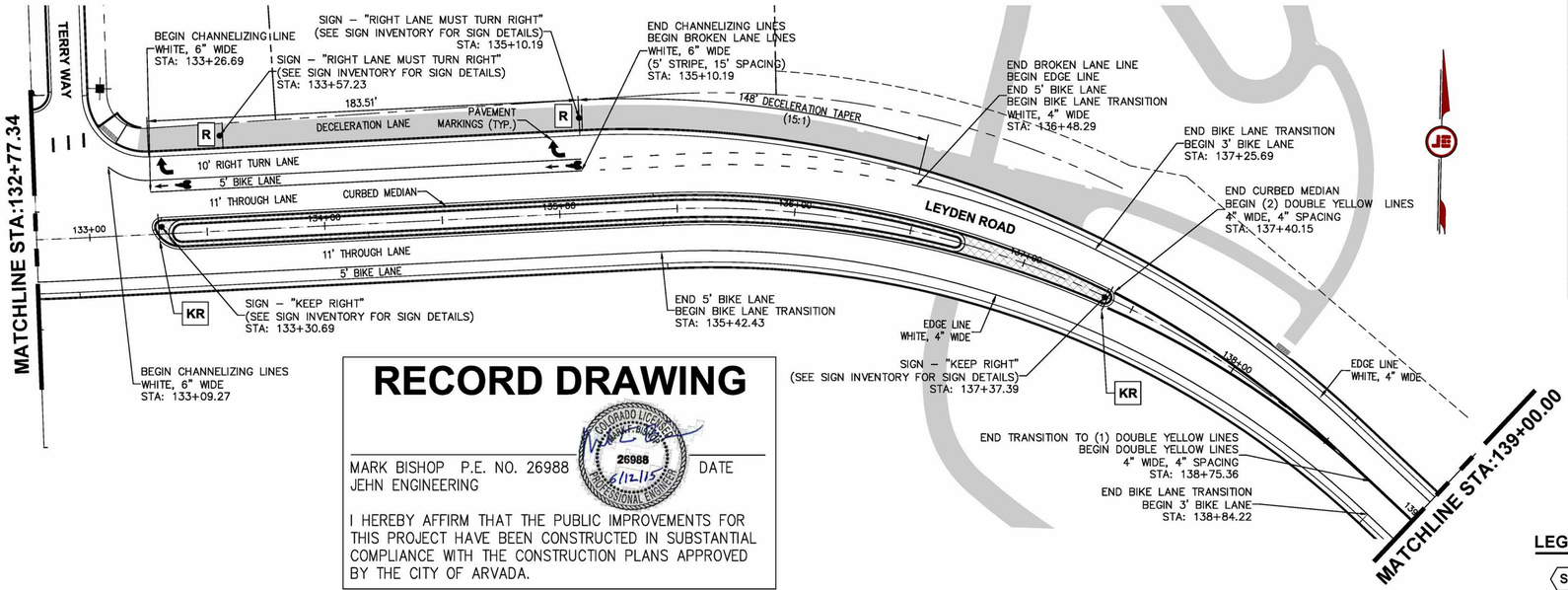




KEYMAP
N.T.S.

AS-BUILTS



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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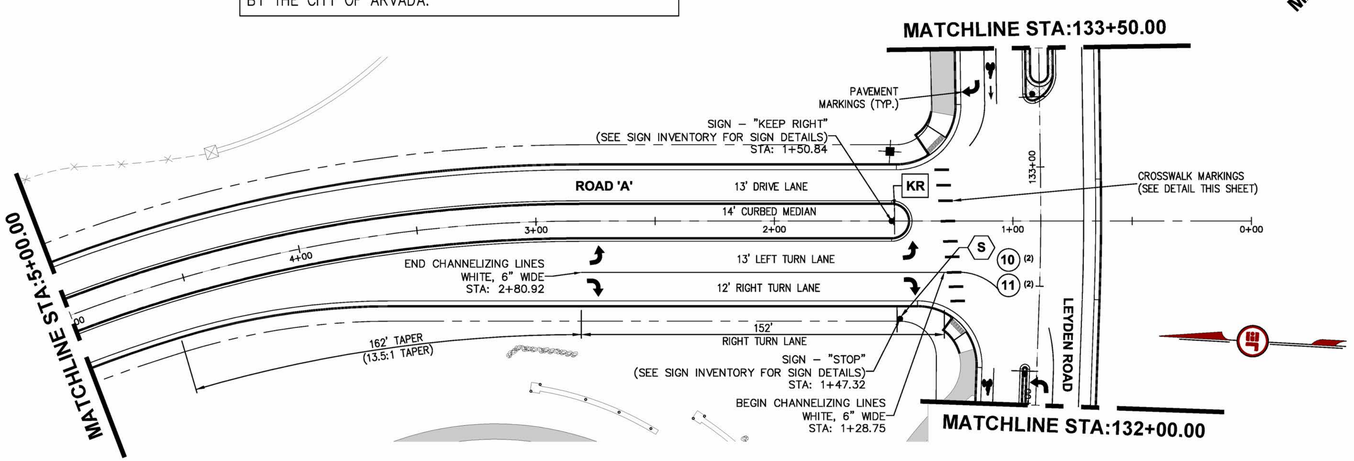


SIGN INVENTORY LIST

ITEM #	QUANTITY OF SIGNS	SIGN DESCRIPTION	CODE #	SIZE
10	4	82ND AVENUE	A-S1-1	-
11	4	TERRY WAY	A-S1-1	-
12	2	YULE WAY	A-S1-1	-
13	24	W 84th AVE	A-S1-1	-
14	16	W 84th DR	A-S1-1	-
15	8	W 83rd PL	A-S1-1	-
16	8	VIOLET CT	A-S1-1	-
17	4	W 83rd DR	A-S1-1	-
18	4	W 84th PL	A-S1-1	-
19	8	WILKERSON CT	A-S1-1	-
20	4	VIRGIL ST	A-S1-1	-
21	4	WIER ST	A-S1-1	-
22	2	W 83rd CR	A-S1-1	-
23	2	W 84th LN	A-S1-1	-
S	23	STOP SIGN	R1-1	30" OCT.
R	4	RIGHT LANE MUST TURN RIGHT	R3-7A	30" x 30"
KR	10	KEEP RIGHT	R4-7	24" x 30"



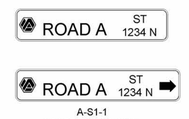
R1-1
STOP



R3-7A
RIGHT LANE MUST TURN RIGHT
(SYMBOL SIGN)
(Arvada Standard)



R4-7
KEEP RIGHT
(SYMBOL SIGN)
(Arvada Standard)



A-S1-1
STREET NAME SIGN
(POST MOUNTED)
(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)

LEGEND

- (S) = PROPOSED STOP SIGN
- (KR) = PROPOSED KEEP RIGHT SIGN
- (R) = PROPOSED RIGHT LANE MUST TURN RIGHT SIGN
- (14) = SINGLE SIGN
- (14)(2) = TWO IDENTICAL SIGNS MOUNTED BACK TO BACK
- = SIGN POST LOCATION*

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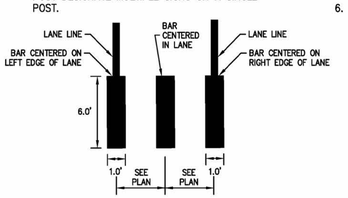

CROSSWALK MARKING DETAILS
N.T.S.

APPROVED: _____ CITY ENGINEER — 3-8-12 DATE — 3354 JOB NUMBER

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	POA

COLORADO REGISTERED ROBERT PAUL BISHOP 21706 3380 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8098 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD - EAST ENTRANCE INTERSECTION
prepared for RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
OKK	BSS	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 30'
SHEET NO: 17 OF 119

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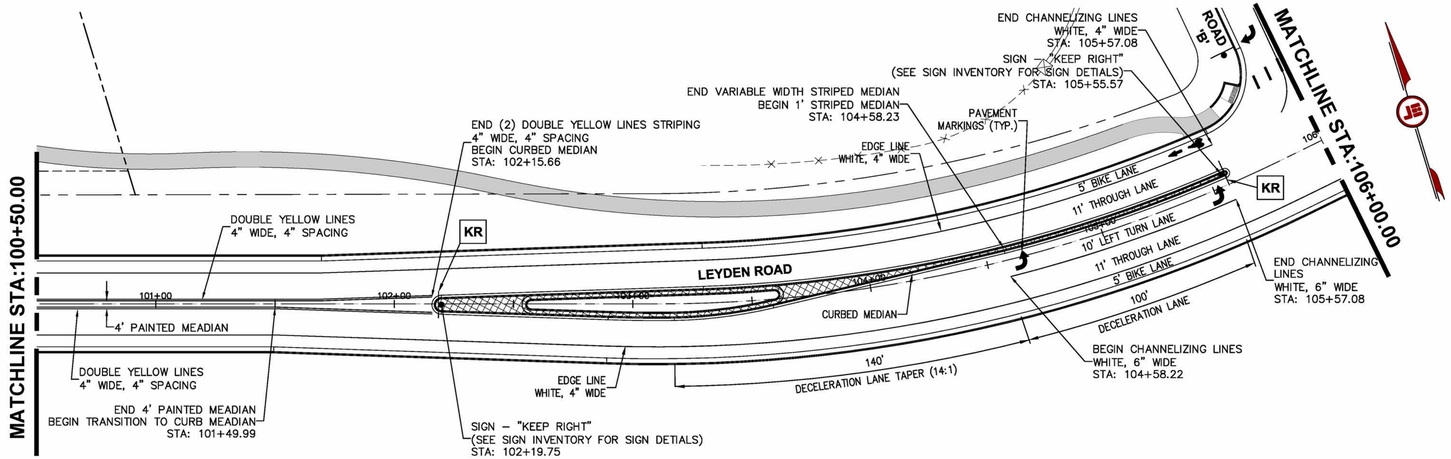
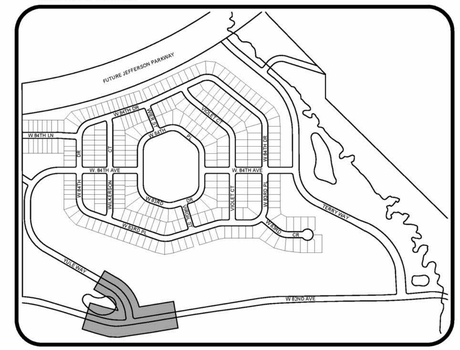
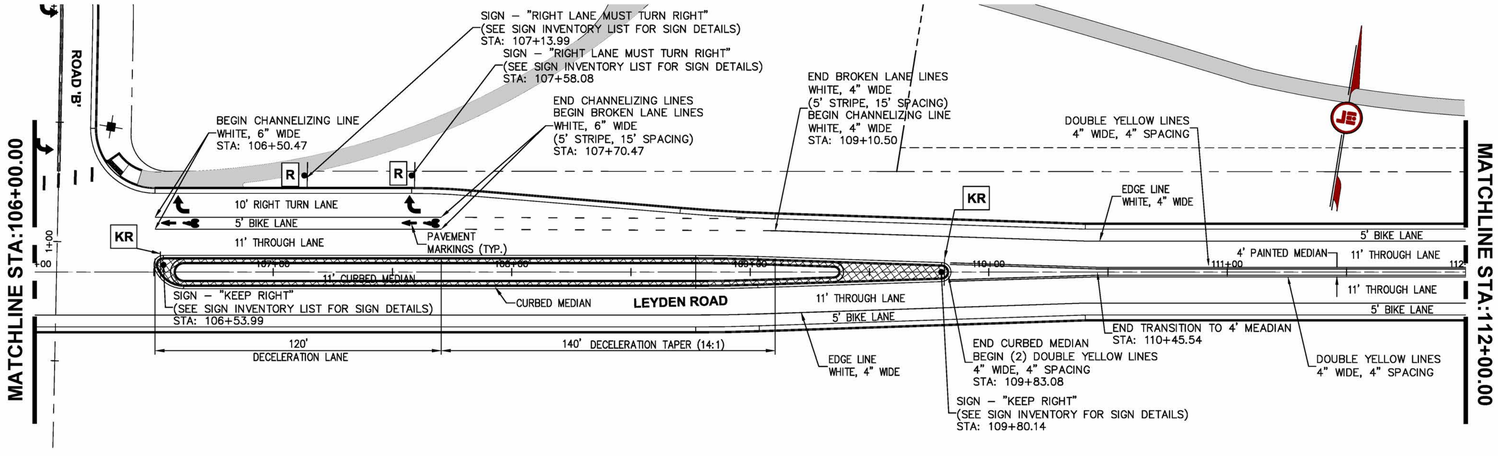


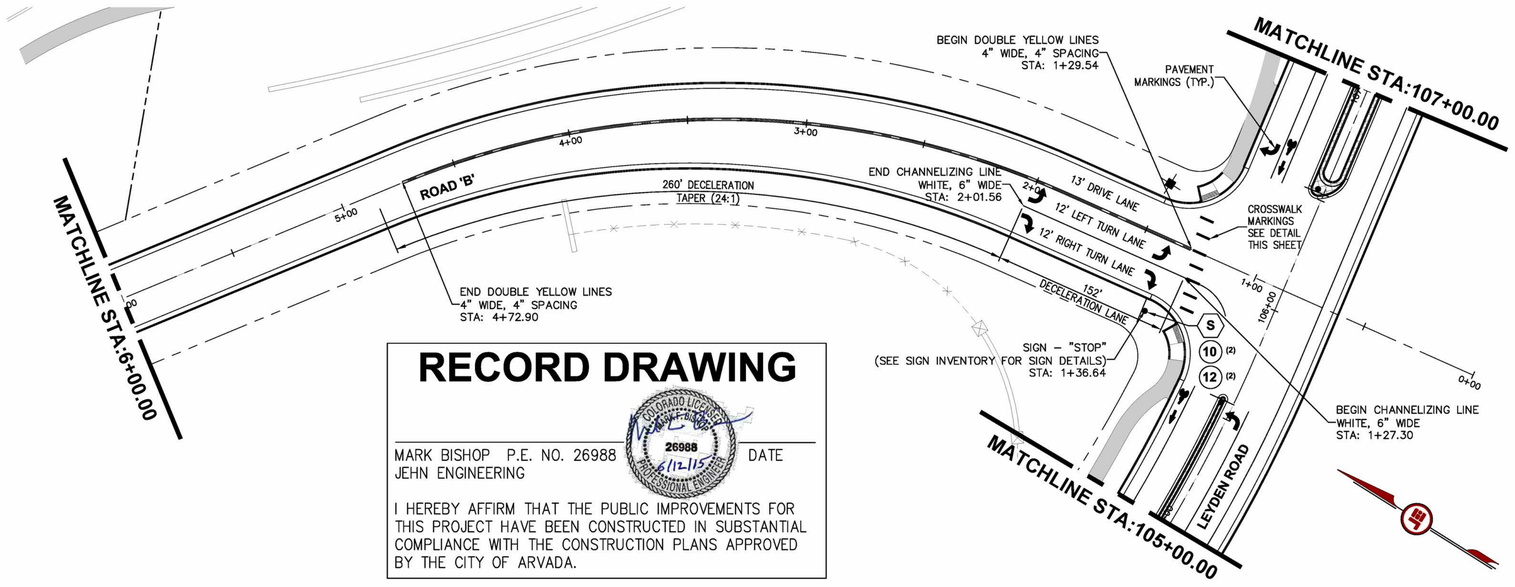


KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 30' HORIZ.

AS-BUILTS





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R3-7A
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R4-7
KEEP RIGHT
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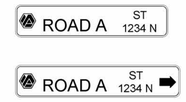
(Arvada Standard)



A-S1-1
STREET NAME SIGN
(POST MOUNTED)
(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)

LEGEND

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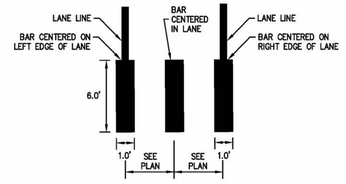

CROSSWALK MARKING DETAILS
N.T.S.

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PNJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 38011

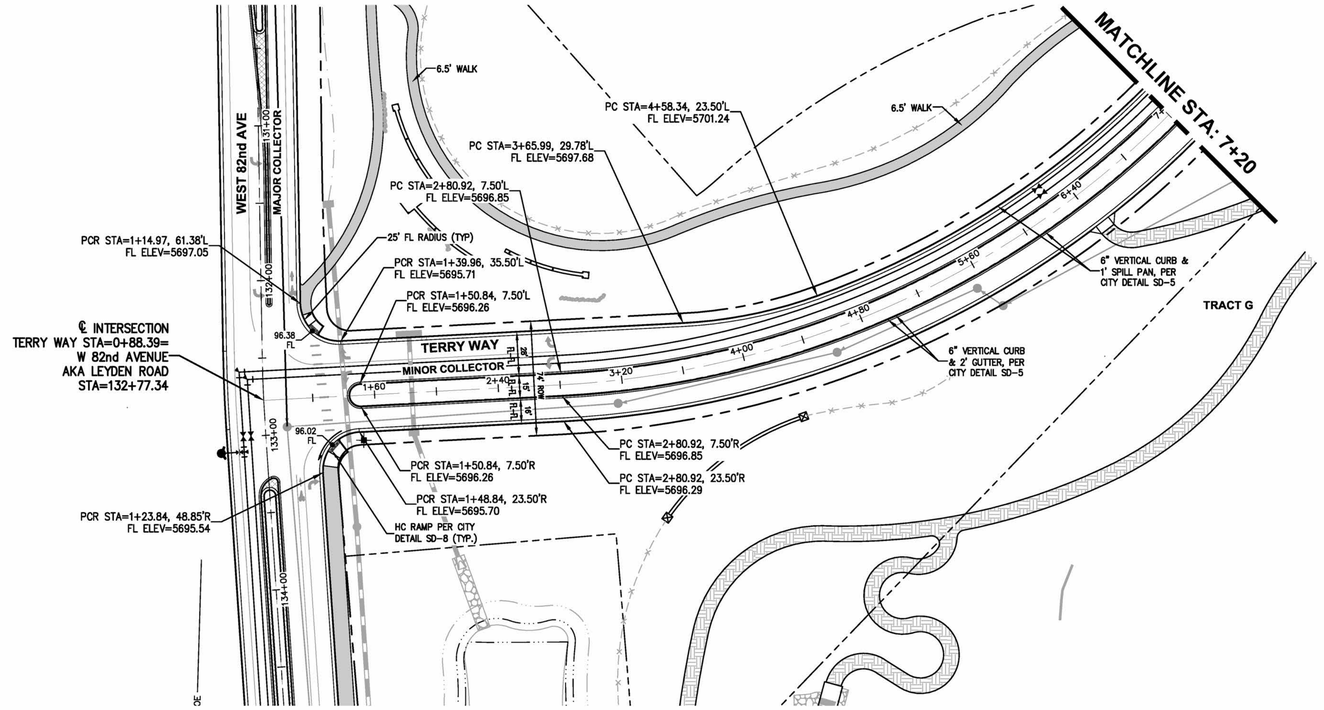
JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD - WEST ENTRANCE INTERSECTION

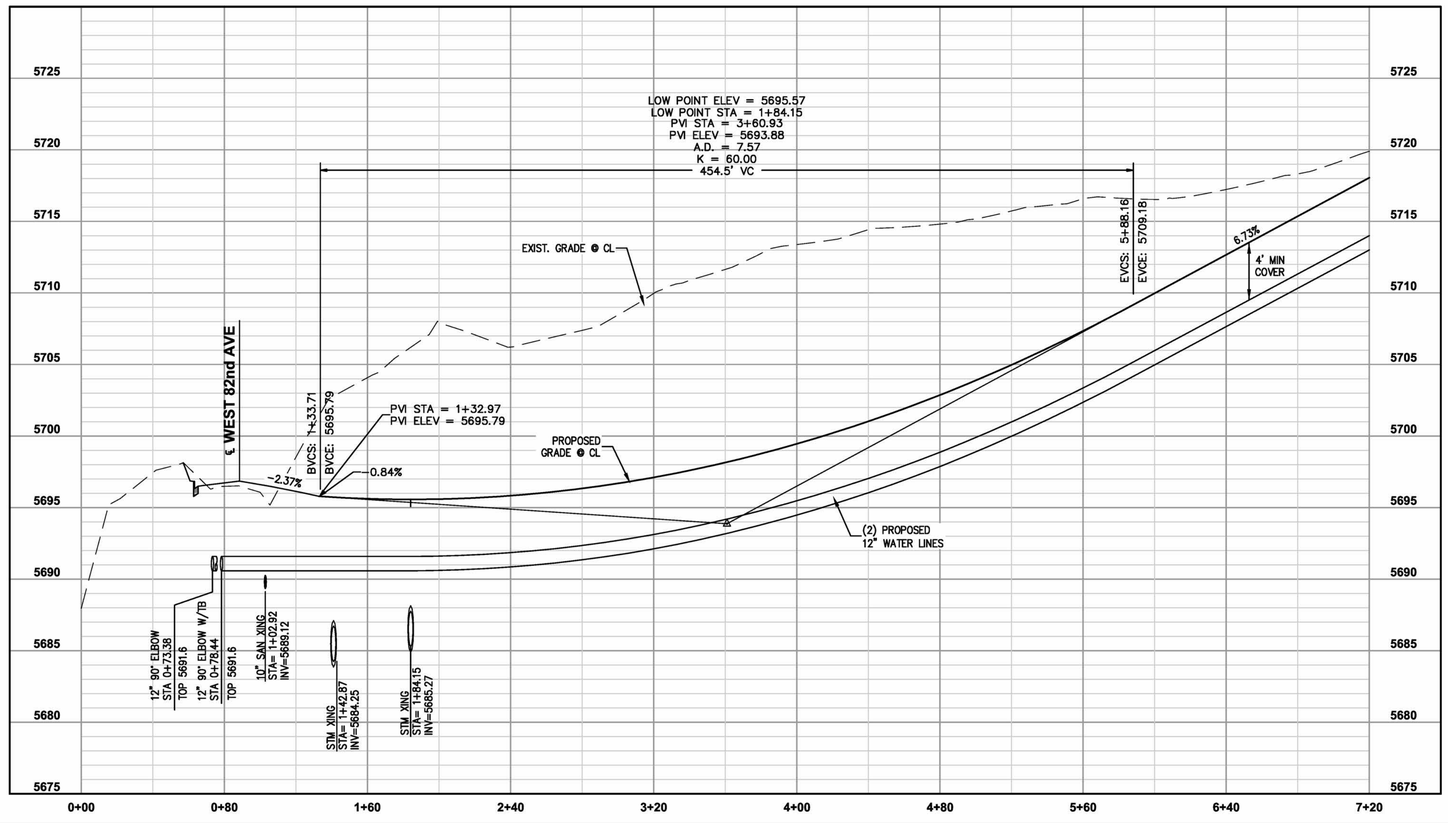
prepared for
RRCEA, LLC.

DRAWN BY:	OKK
DESIGNED BY:	BSS
DRAWING NAME	11-ASBUILTS
APPROVED BY:	
JOB NUMBER:	2036-210-054
DATE:	02/17/2012
SCALE:	1" = 30'
SHEET NO:	18 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set18-0054-F1-LR WEST SIGNAGE-81D14.dwg, 6/16/2015 11:43:47 AM



TERRY WAY PLAN AND PROFILE



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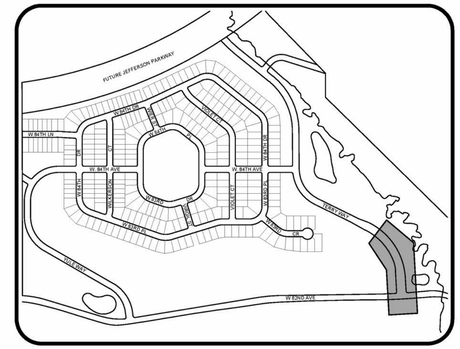

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

COLORADO LICENSED — 26988 — PROFESSIONAL ENGINEER — 6/12/15

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40 0 20 40 80
ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 20' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED: _____ 8-8-12 3354
CITY ENGINEER — DATE — JOB NUMBER

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NO	DESCRIPTION	DATE	BY
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REVISIONS

COLORADO REGISTERED — 33801 — PROFESSIONAL ENGINEER

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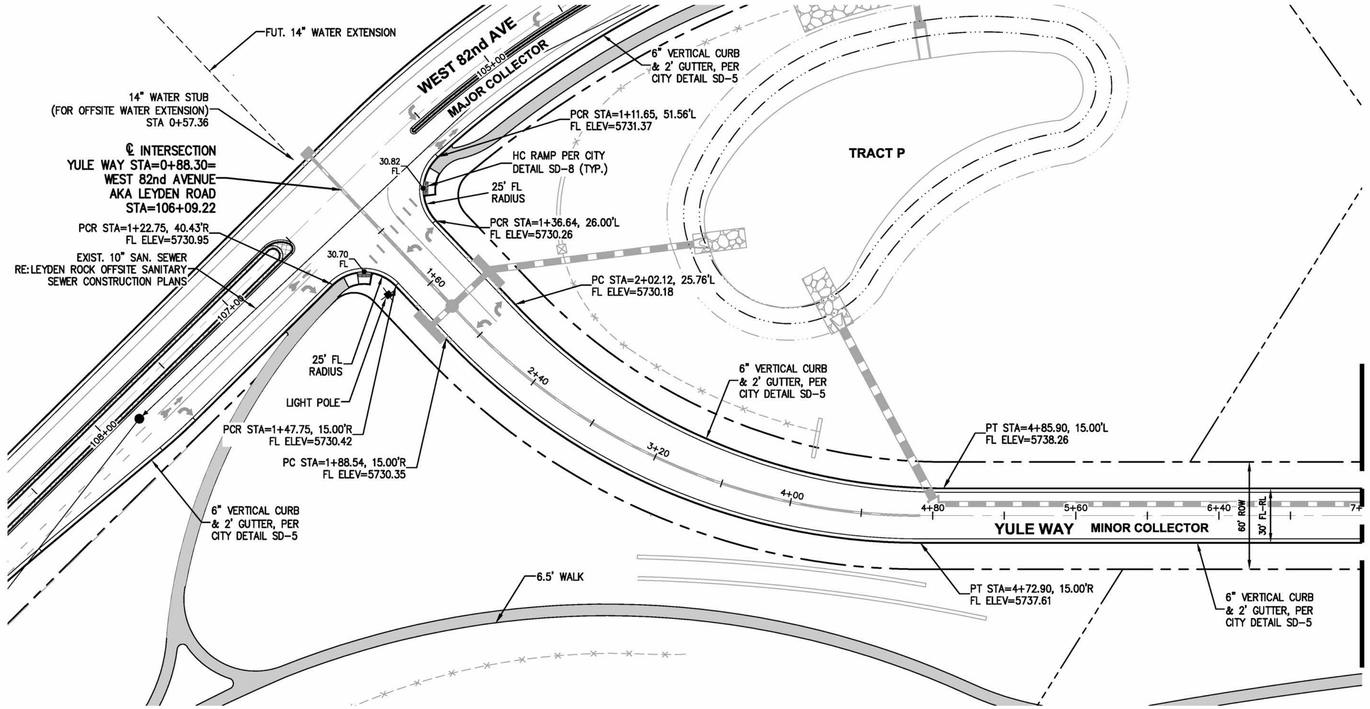
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
ROAD PLAN & PROFILE
TERRY WAY - 1

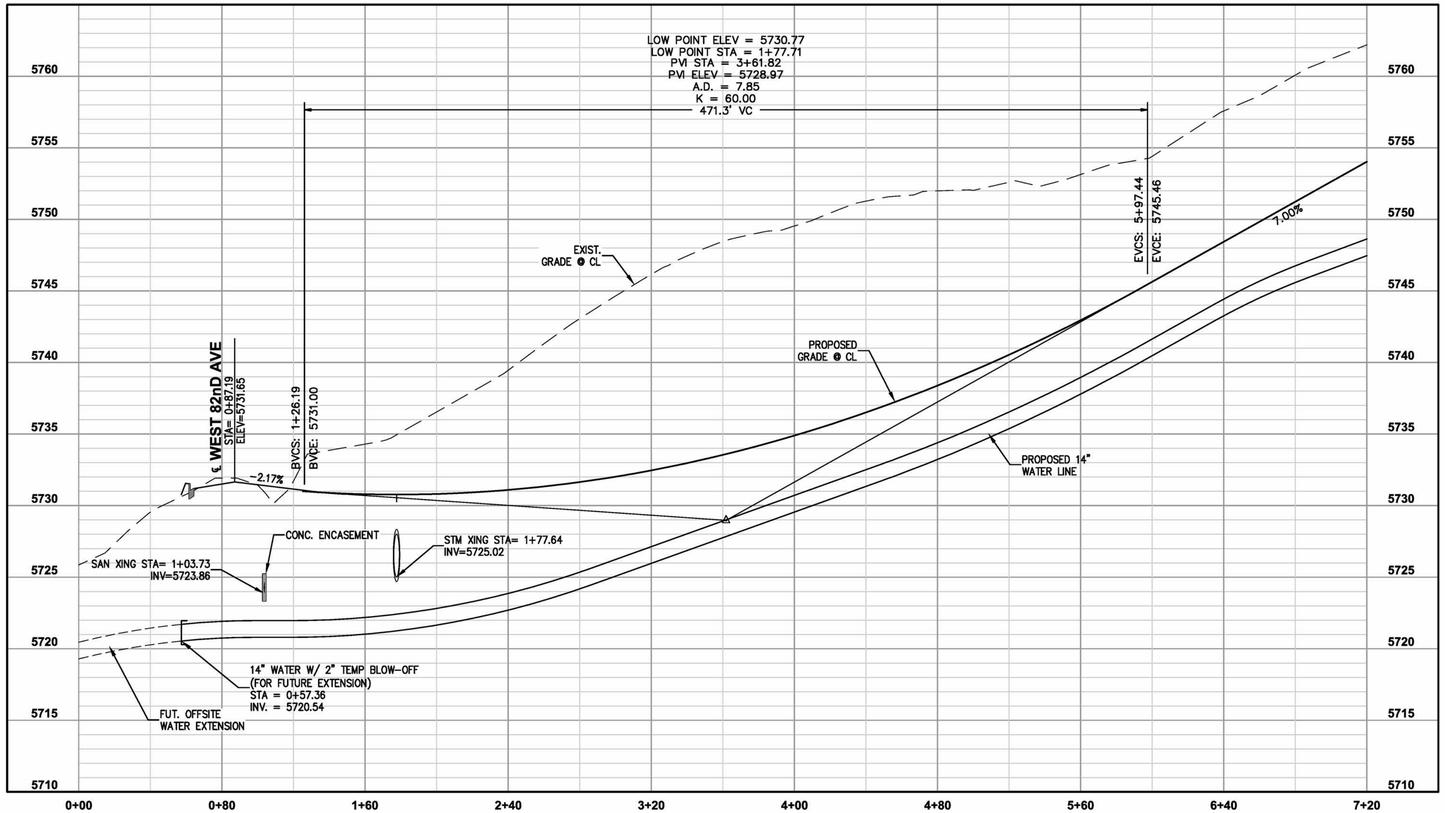
prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: P-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 21 OF 119

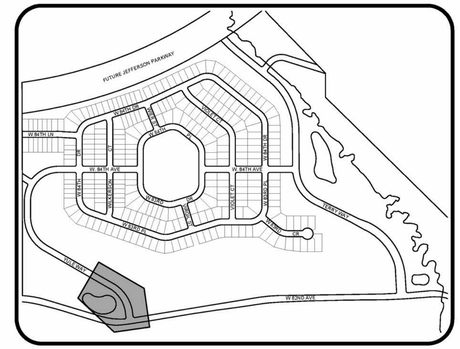
J:\2036\210-054\SURVEY\ASBUILT\set\21-0054-F1-TERRY WAY 1-ROAD-B1014.dwg, 6/16/2015 11:41:50 AM



YULE WAY PLAN AND PROFILE



JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 20' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED: _____ 3-8-12 3354
CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

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www.uncc.org
for marking of underground member utilities.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6039 FAX: (303) 467-9438

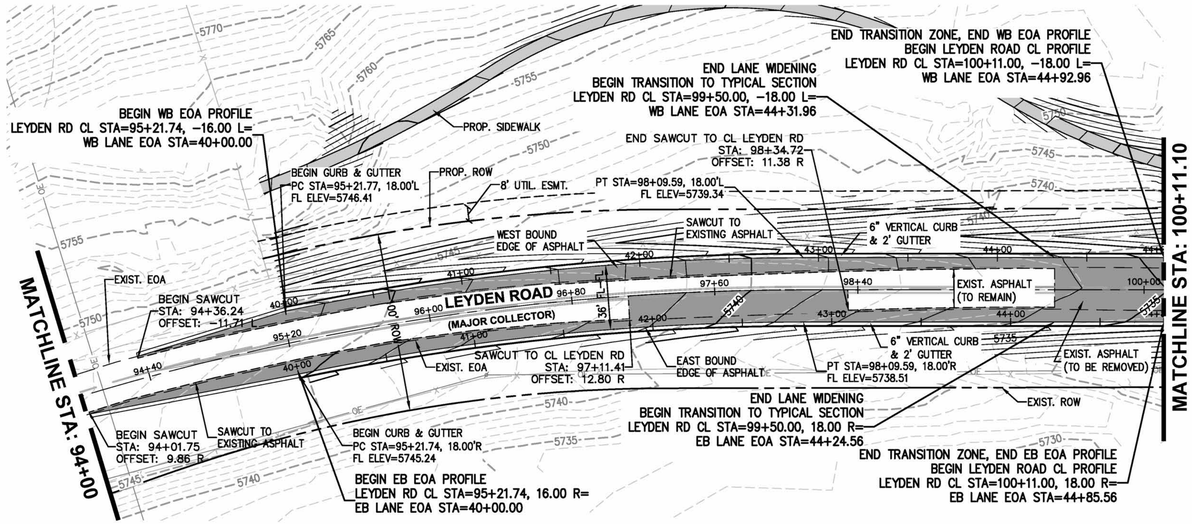
LEYDEN ROCK FILING 1
ROAD PLAN & PROFILE
YULE WAY - 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 25 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\25-0054-F1-YULE WAY 1-ROAD-B1014.dwg, 6/18/2015 9:24:47 AM



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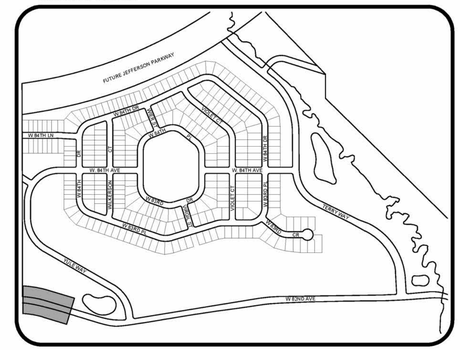
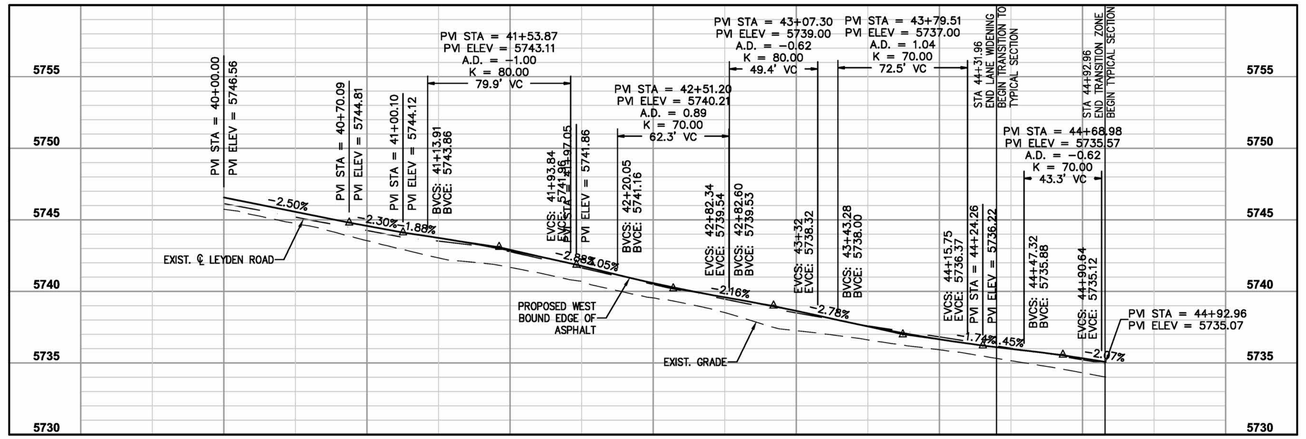
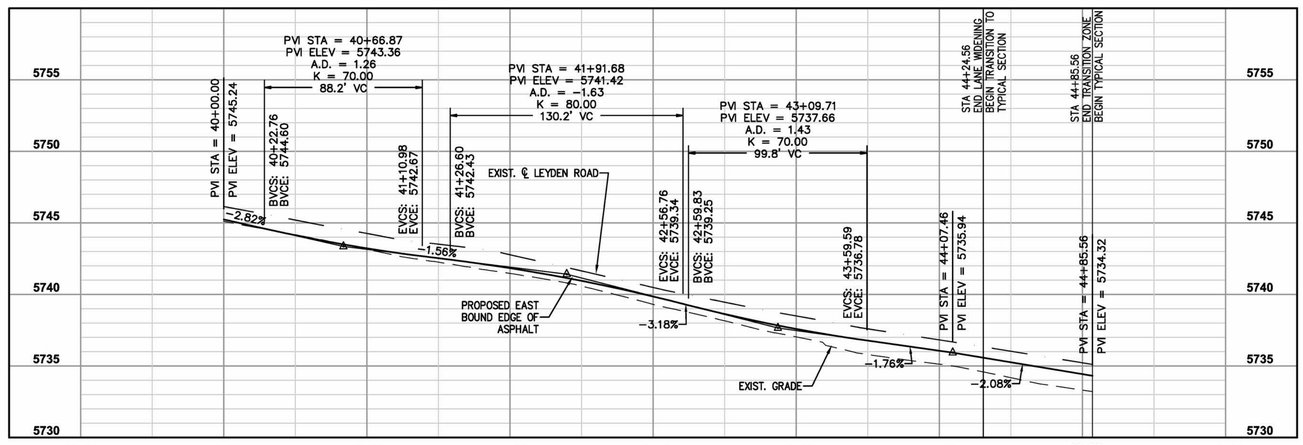


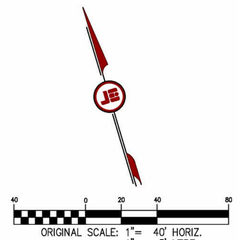
KEYMAP
N.T.S.



WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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NOTES

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2. ALL ELEVATIONS AND OFFSETS ARE TO FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED:
CITY ENGINEER — DATE 3-8-12 — 3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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Dig Safely. 1-800-922-1987
for marking of underground member utilities.

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PDJ	12/15/14

COLORADO REGISTERED
MARK P. BISHOP
33801
PROFESSIONAL ENGINEER

JEHN ENGINEERING
9990 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6038 FAX (303) 467-9438

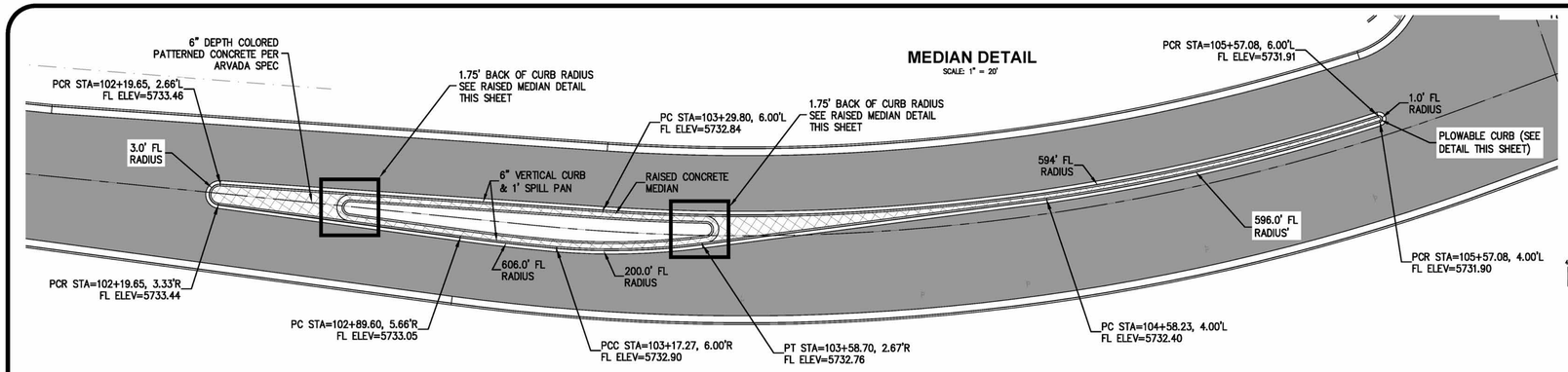
LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 1

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	P1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 52 OF 119

J:\2036\210-054\SURVEY\ASBUILTs\set\52-0054-F1-P&P-1-81D14.dwg, 6/16/2015 12:39:04 PM



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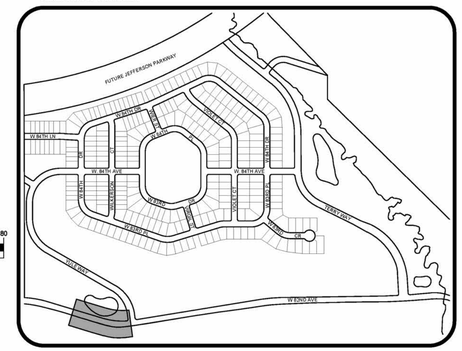
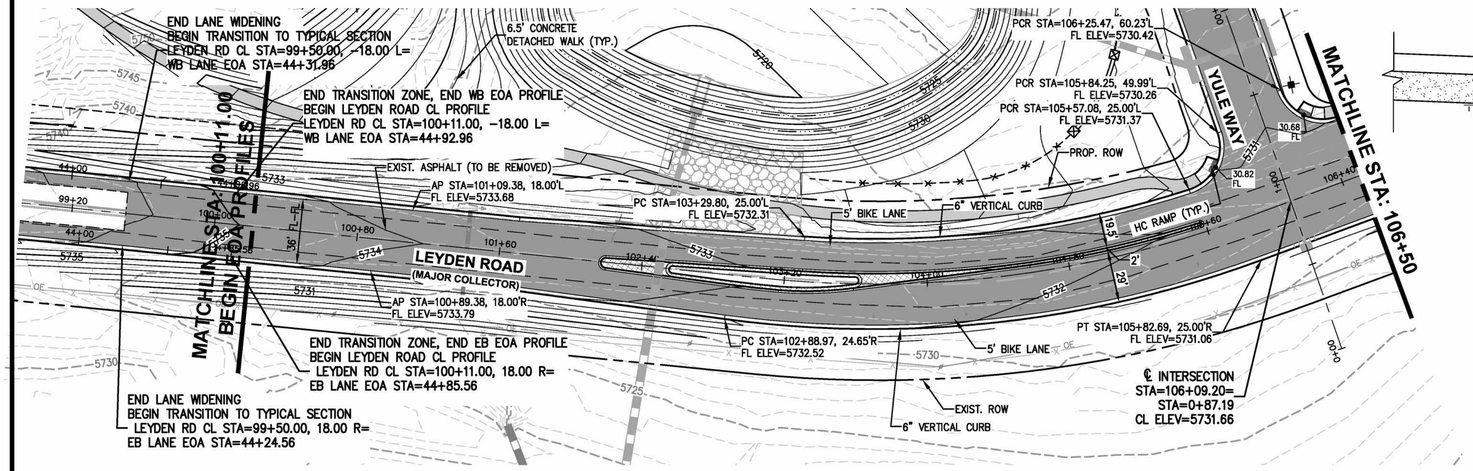
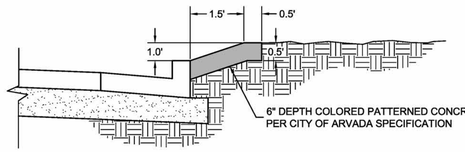
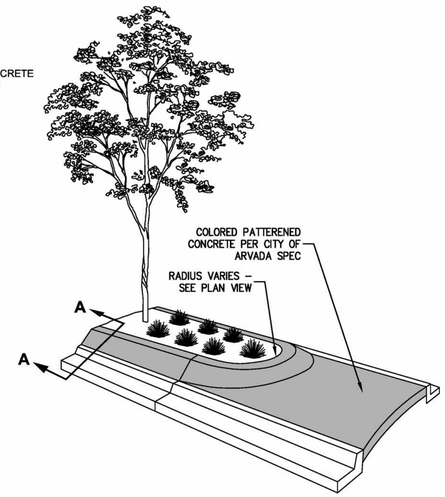


KEYMAP
N.T.S.



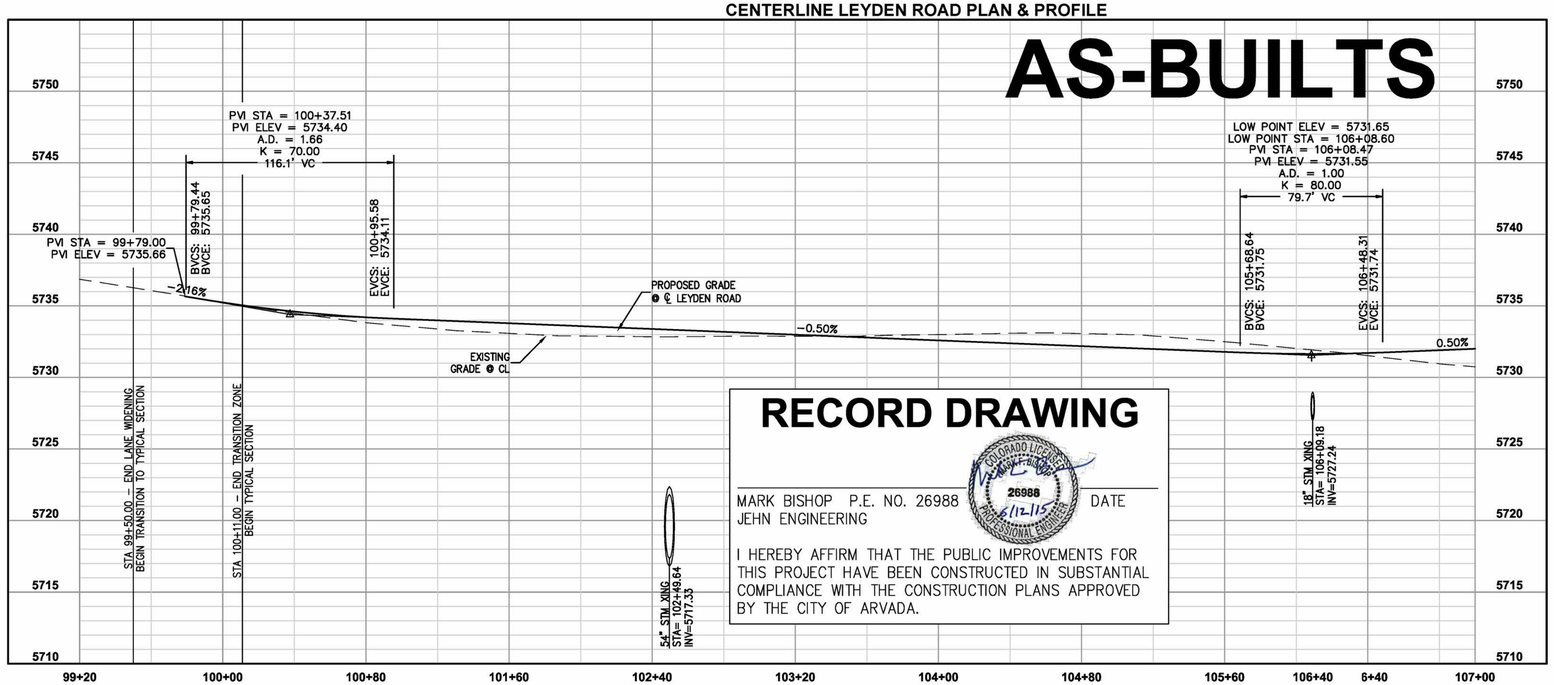


SECTION A-A
NTS



RAISED MEDIAN DETAIL
NTS

CENTERLINE LEYDEN ROAD PLAN & PROFILE

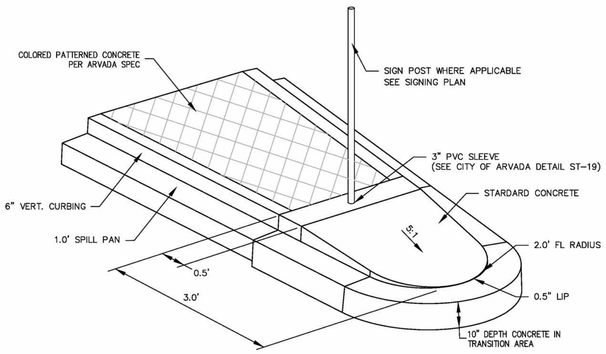


RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED MARK BISHOP 26988 PROFESSIONAL ENGINEER 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.



PLOWABLE CURB DETAIL
NTS

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED: _____ CITY ENGINEER
8-8-12 DATE
3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED MARK BISHOP 12-15-14 26988 PROFESSIONAL ENGINEER

JEHN ENGINEERING JE
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 2

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

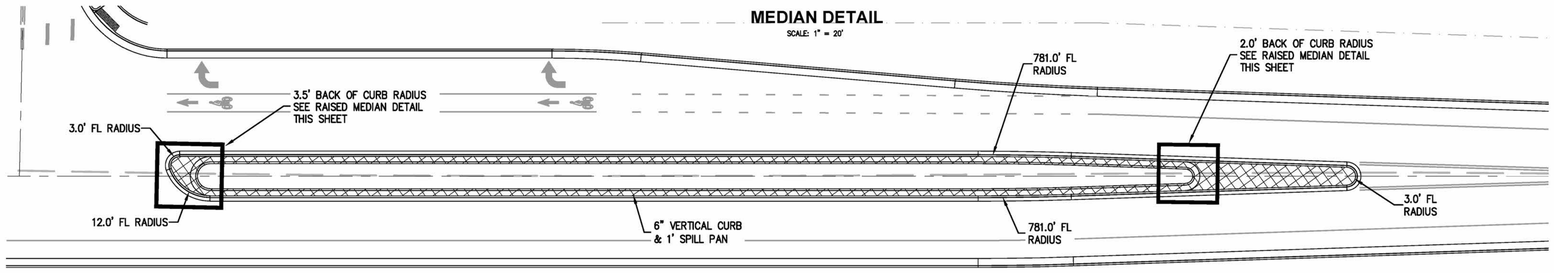
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 53 OF 119

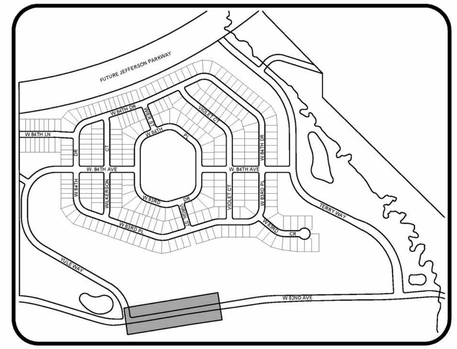
J:\2036\210-054\SURVEY\ASBUILT\set\S3-0054-F1-P&P-2-B1014.dwg, 6/16/2015 1:00:20 PM

JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

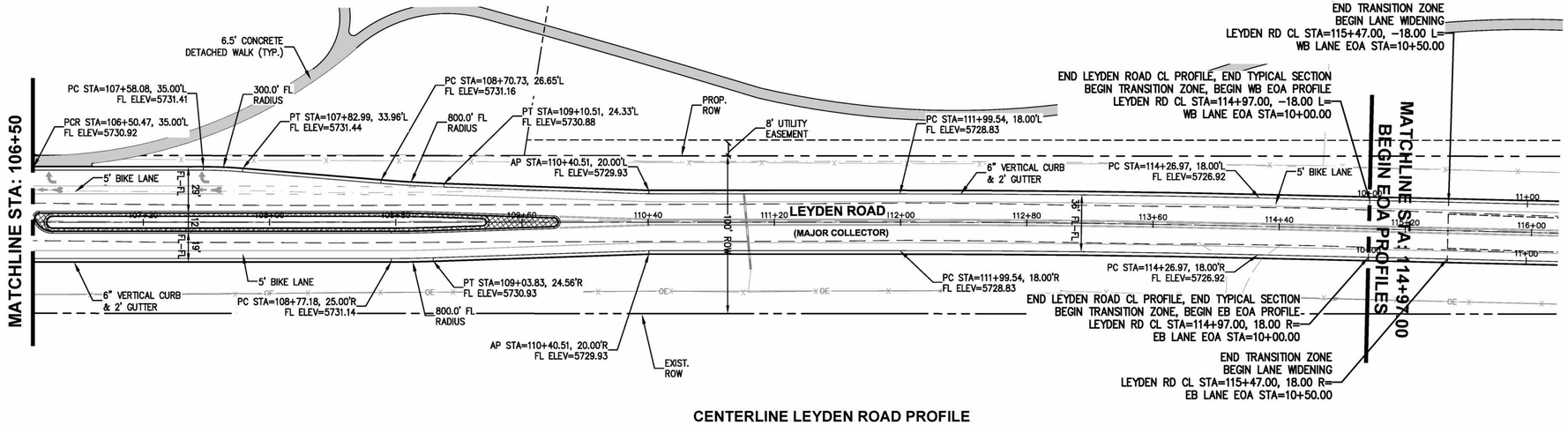
MEDIAN DETAIL

SCALE: 1" = 20'

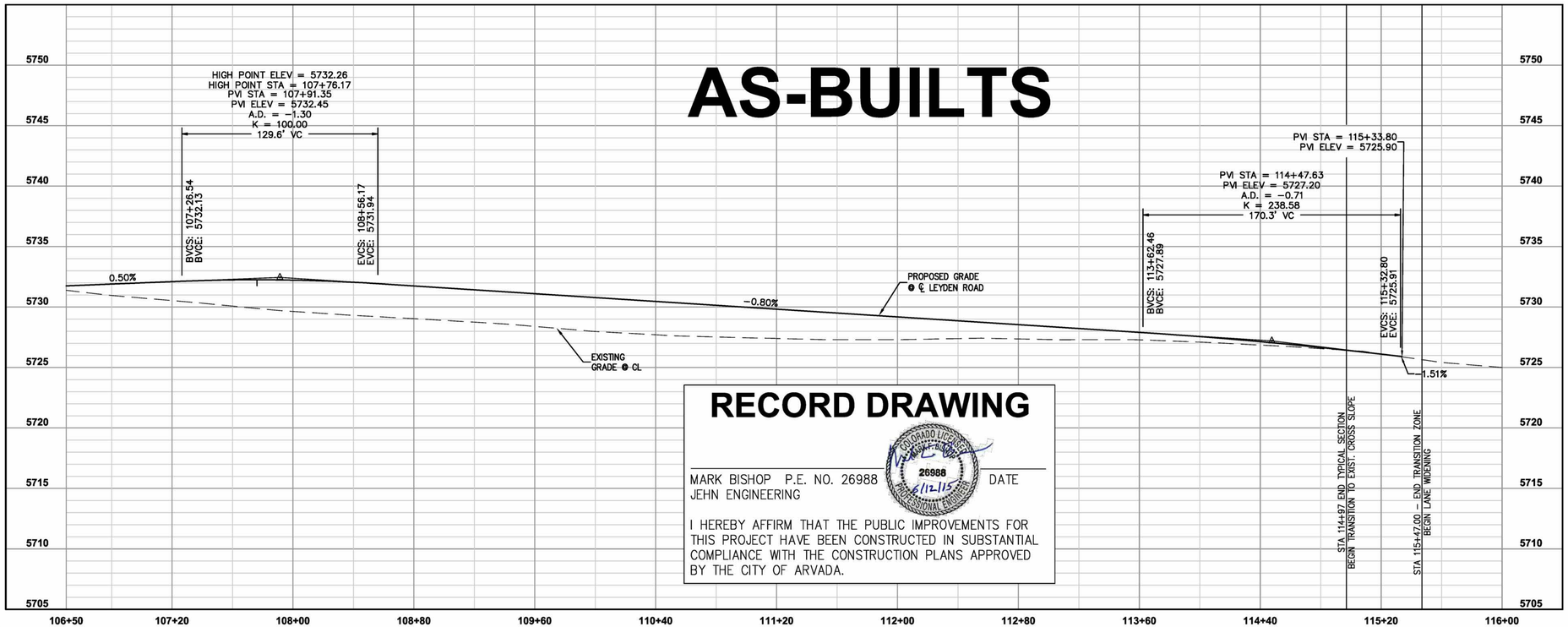




KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED MARK BISHOP 26988 PROFESSIONAL ENGINEER 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

ORIGINAL SCALE: 1"= 40' HORIZ.
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NOTES

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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED:
Patrick Chrystal PE 3-8-12 3352
CITY ENGINEER DATE JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8008 FAX: (303) 467-5438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 3

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: OKK
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 54 OF 119

J:\2036\210-054\SURVEY\AS-BUILT\set\54-0054-F1-P&P-3-81014.dwg, 6/16/2015 10:25:5 PM

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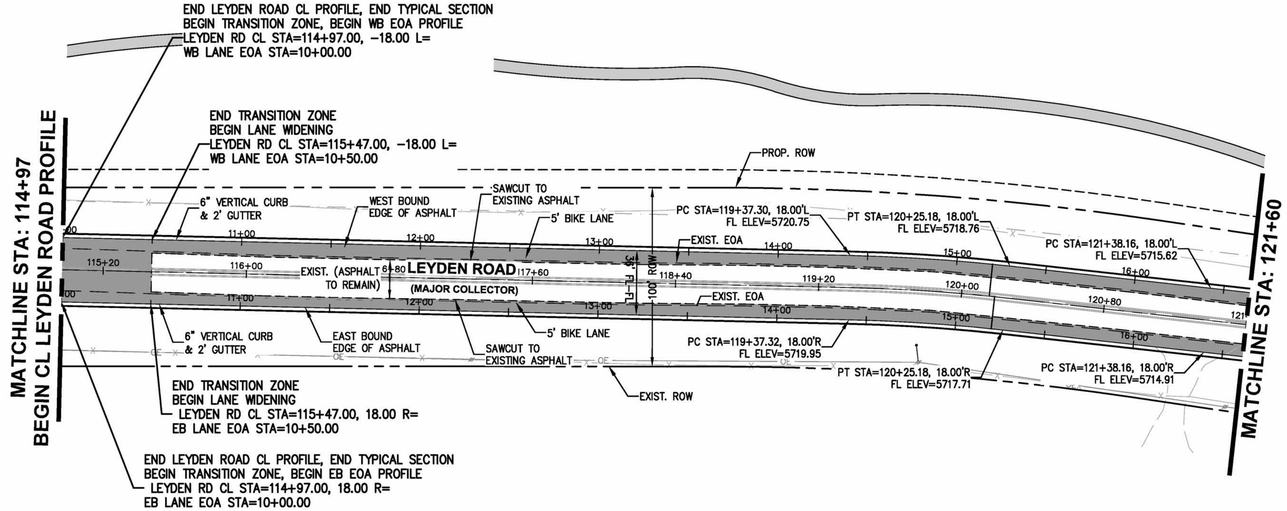
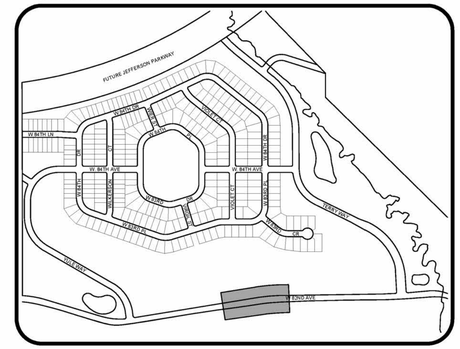
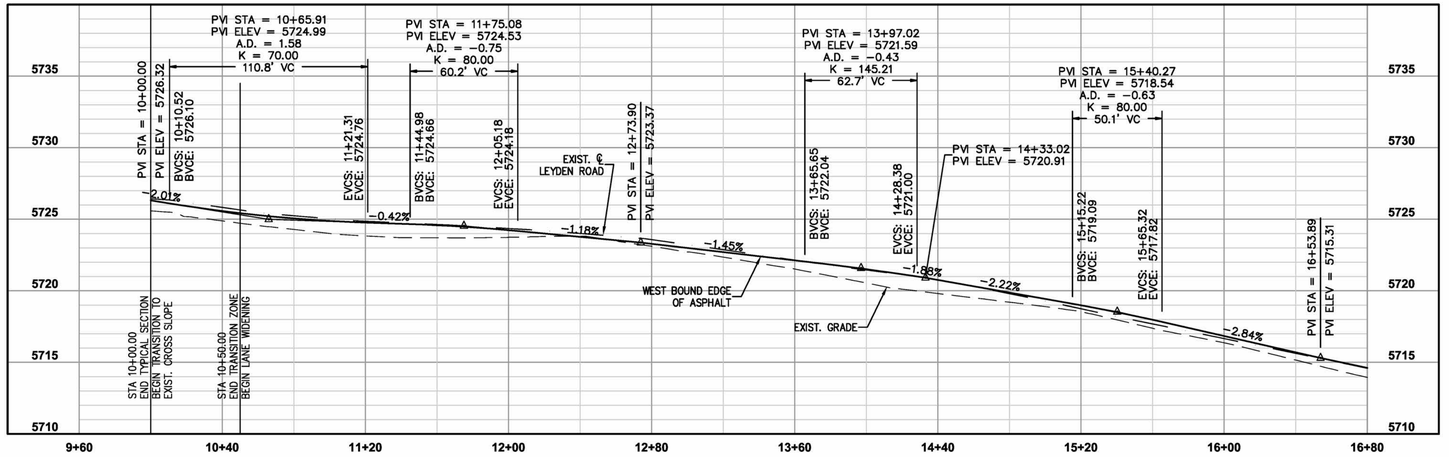
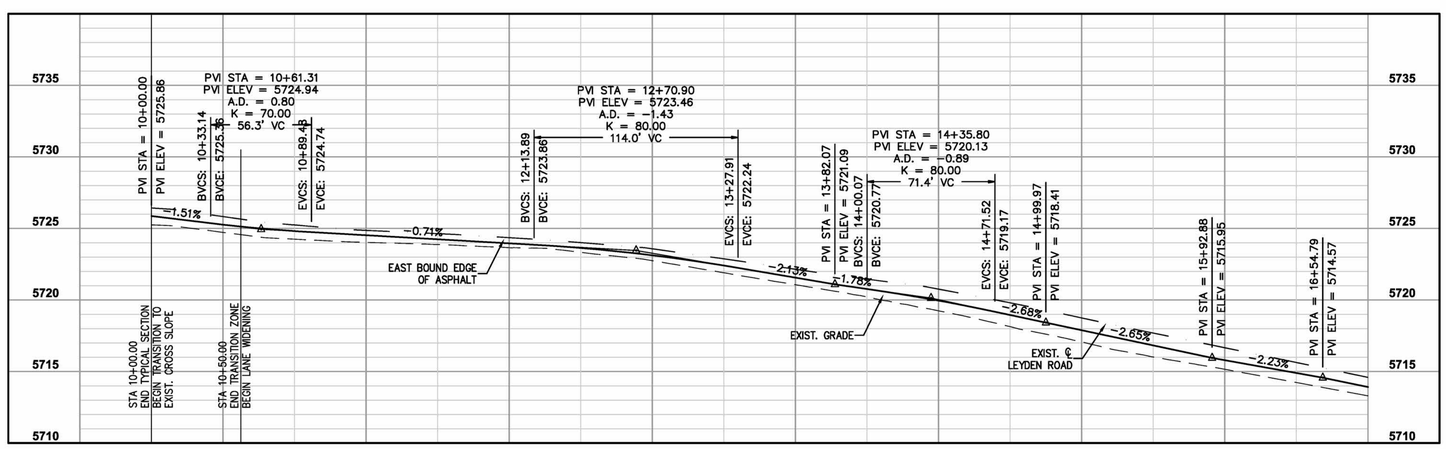




AS-BUILTS



WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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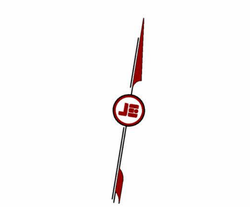

NOTES

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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED: _____ 8-8-12 3352
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PDJ	12/15/14

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER — MARK PAUL BISHOP — 26988

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 4

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	H-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 55 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\55-0054-F1-P&P-4-81014.dwg, 6/17/2015 8:45:52 AM

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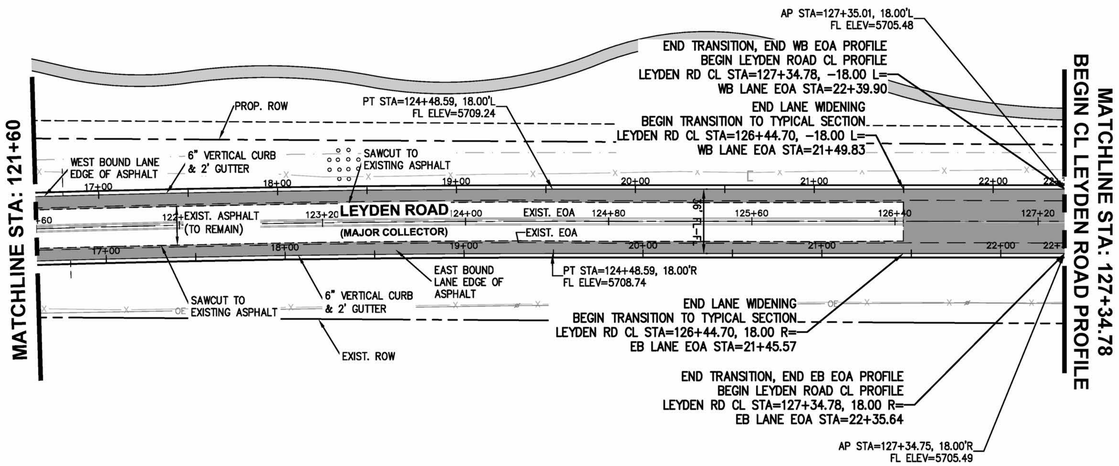
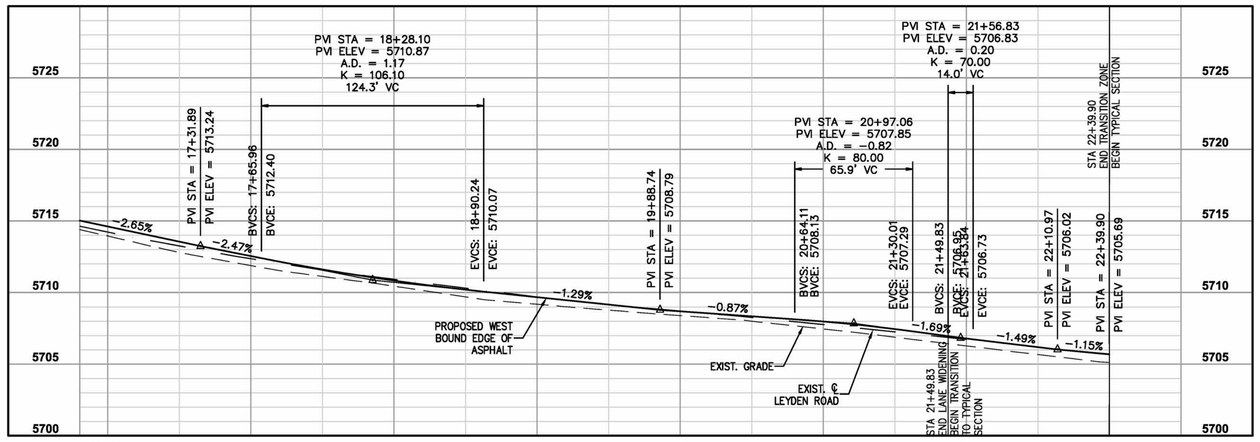
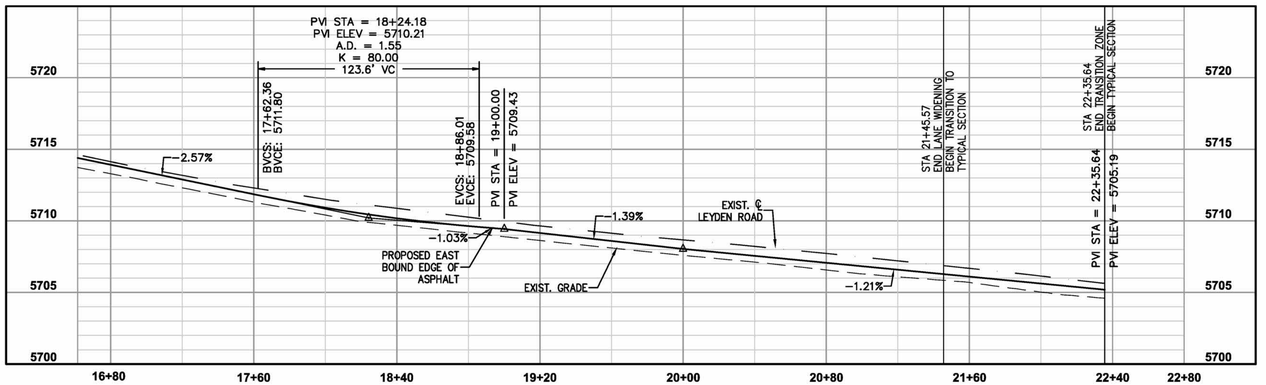
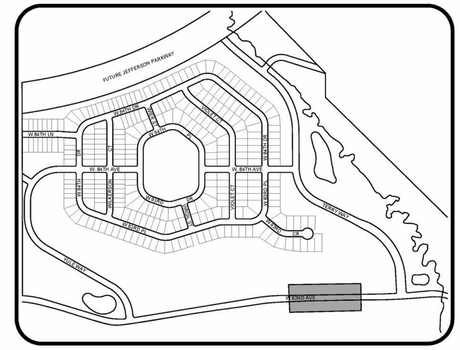




WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE



KEYMAP
N.T.S.

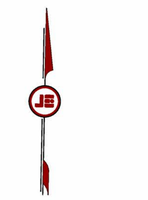
AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED 26988 PROFESSIONAL ENGINEER 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED: _____ CITY ENGINEER
3-8-12 DATE
3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION BAR IS ONE INCH ON ORIGINAL DRAWING
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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PAU

REVISIONS

COLORADO REGISTERED 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8008 FAX: (303) 467-5408

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 5

prepared for
RRCEA, LLC.

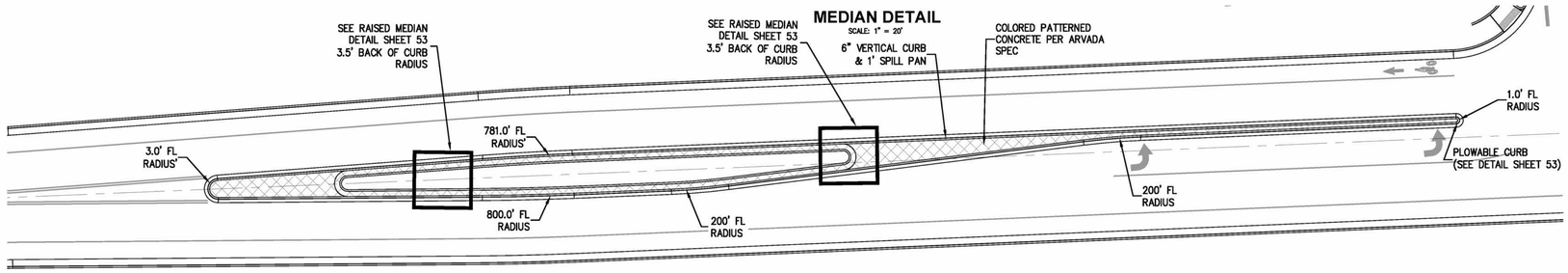
DRAWN BY: OKK
DESIGNED BY: OKK
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

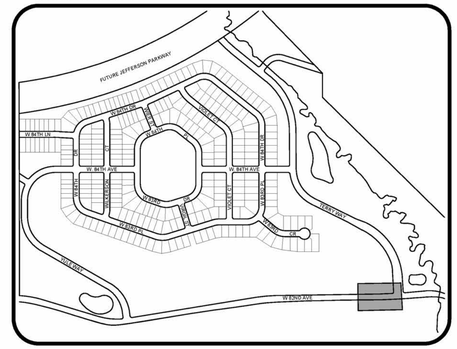
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 56 OF 119

J:\2036\210-054\SURVEY\AS-BUILTS\set05\-0054-F1-P&P-5-81014.dwg, 6/17/2015 8:44:48 AM

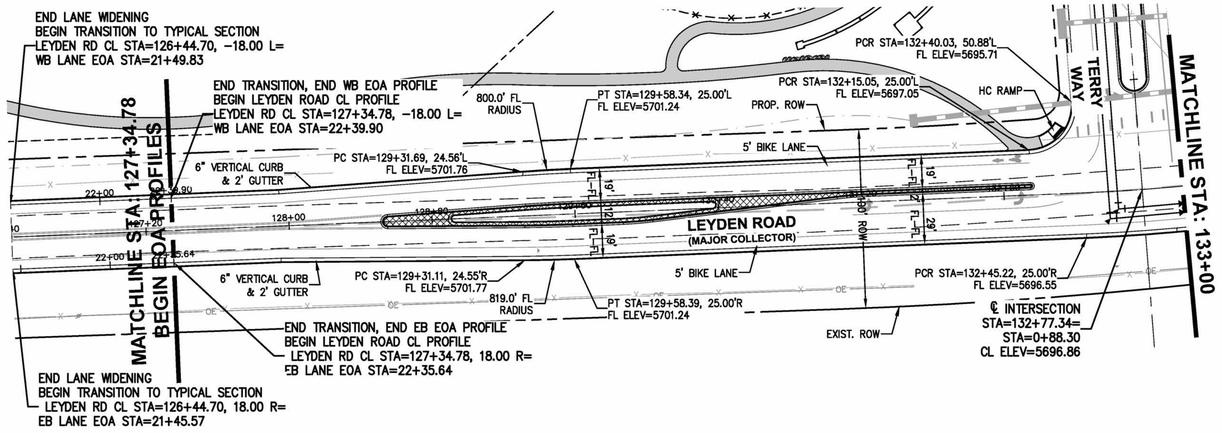
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

MEDIAN DETAIL
SCALE: 1" = 20'

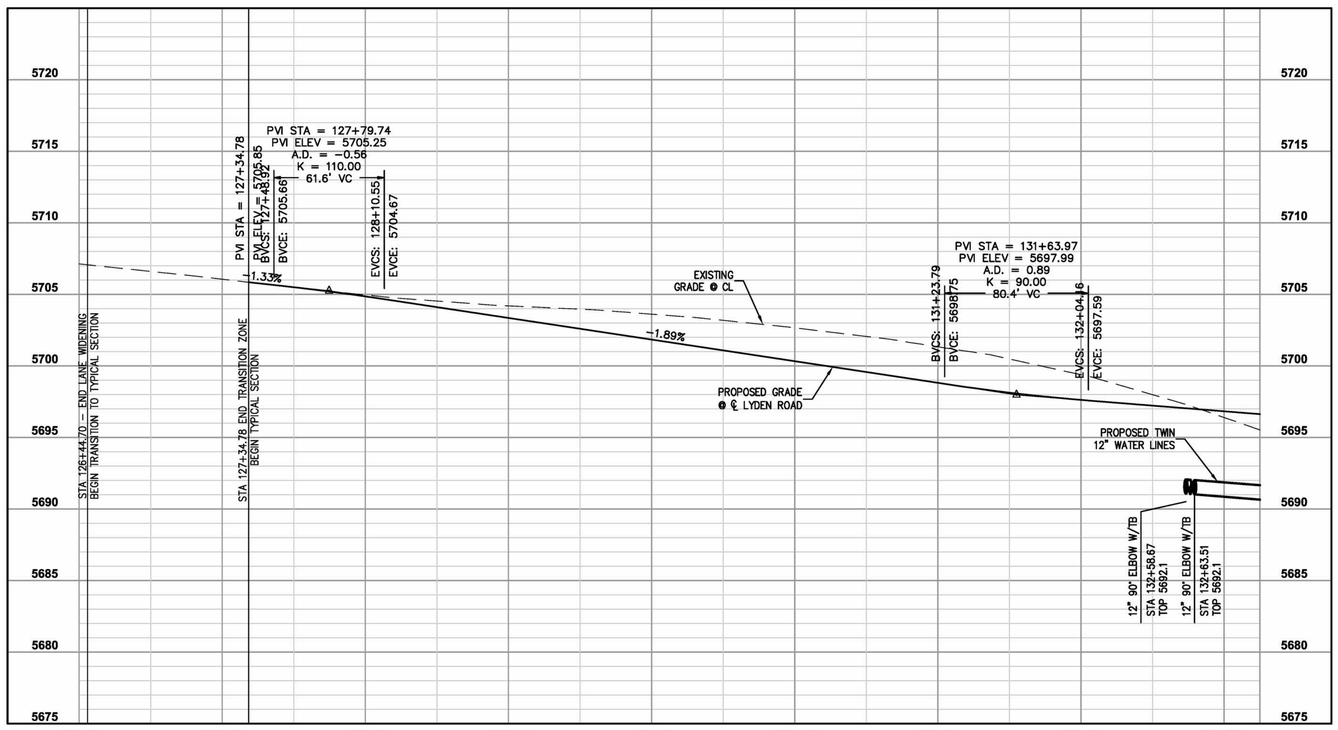


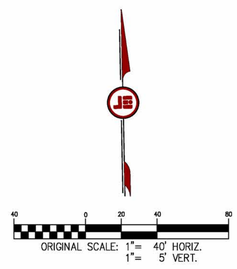


KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE





AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

NOTES

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APPROVED:
CITY ENGINEER — DATE 8-8-12 — JOB NUMBER 3352

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PDJ	12/15/14

COLORADO REGISTERED PROFESSIONAL ENGINEER — 33801 — 6-15-12

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 6

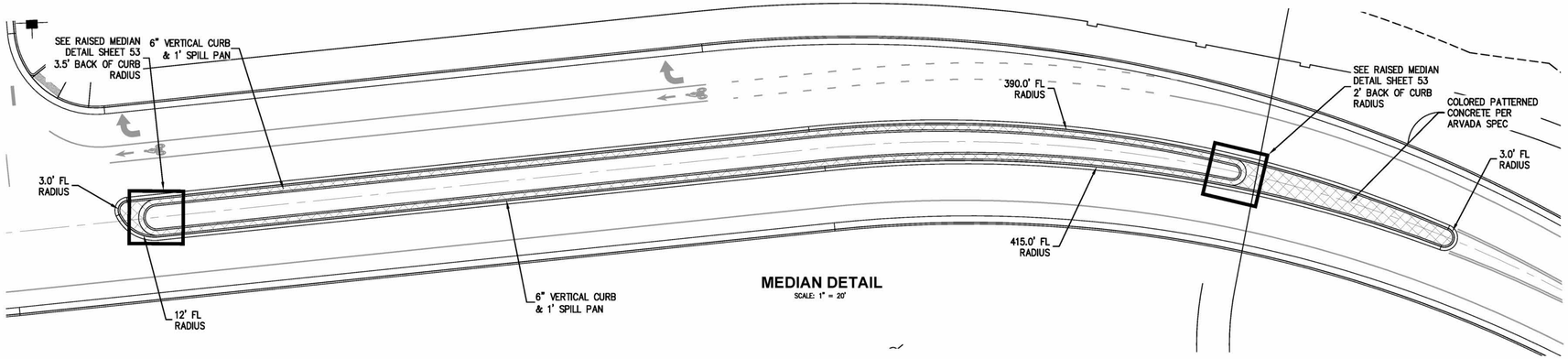
prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

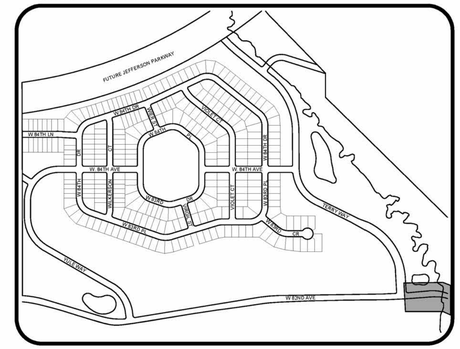
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 57 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\S7-0054-F1-P&P-6-81014.dwg, 6/17/2015 8:43:30 AM

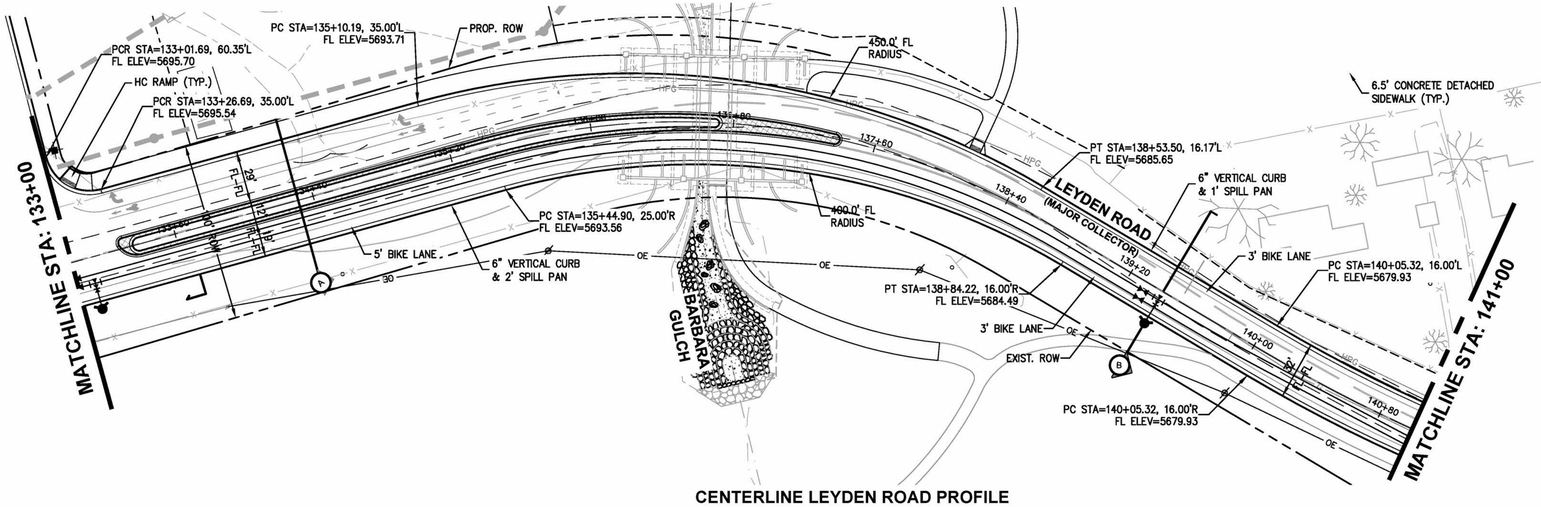
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



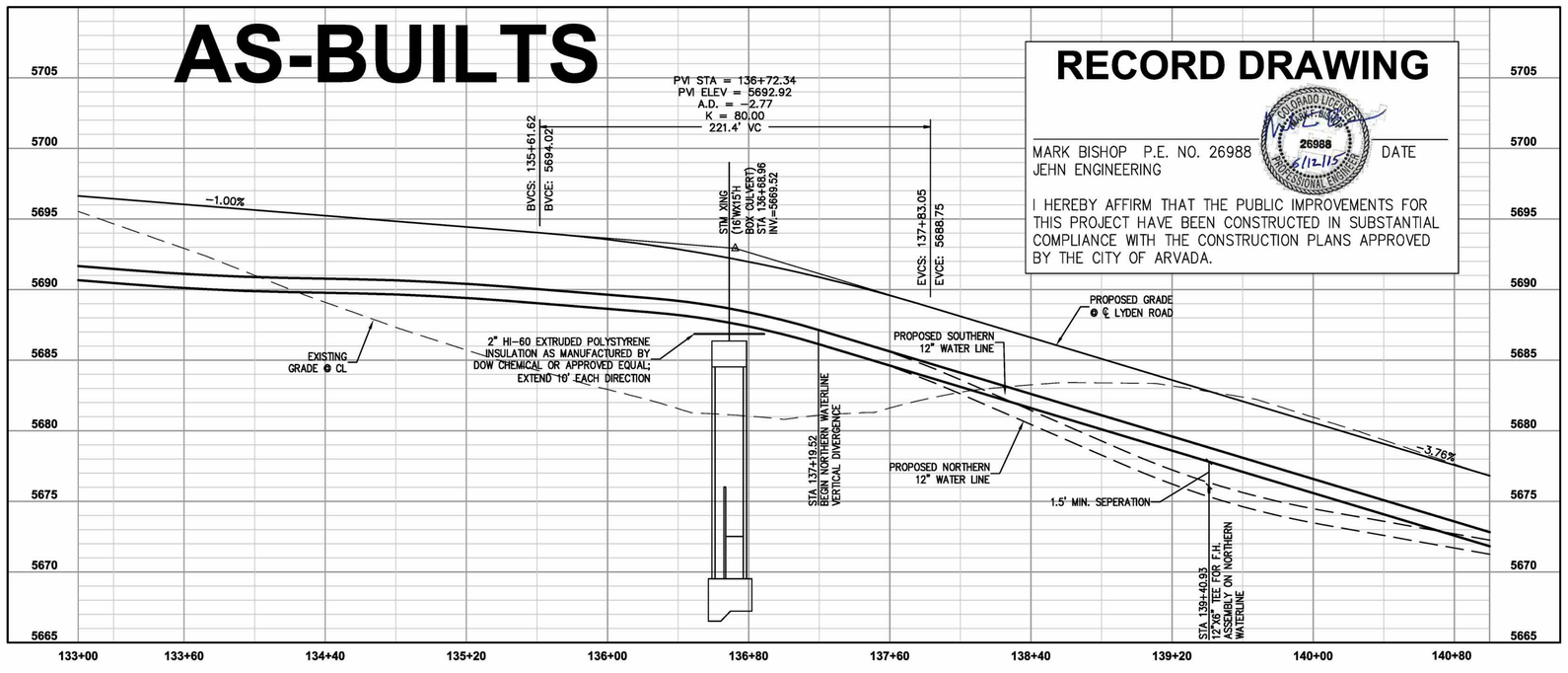
MEDIAN DETAIL
SCALE: 1" = 20'



KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE

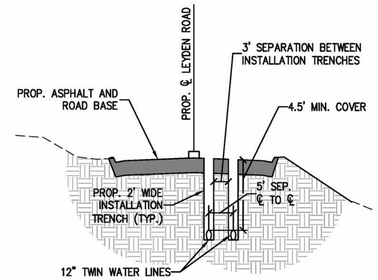


RECORD DRAWING

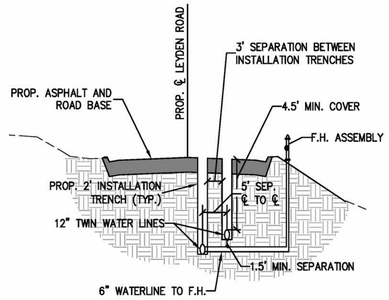
MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

26988 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

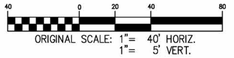


TWIN 12" WATERLINE TYPICAL SECTION A-A
N.T.S.



SECTION B-B
N.T.S.





ORIGINAL SCALE: 1"= 40' HORIZ.
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APPROVED: _____ 5-8-12 3352
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PJU

REVISIONS

COLORADO REGISTERED 12-15-14 CHRISTOPHER T. TOMAO 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
9990 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 457-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 7

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: OKK
DRAWING NAME: P1-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 58 OF 119

J:\2036\210-054\SURVEY\ASBUILTs\set\58-0054-F1-P&P-7-81D14.dwg, 6/17/2015 8:51:22 AM

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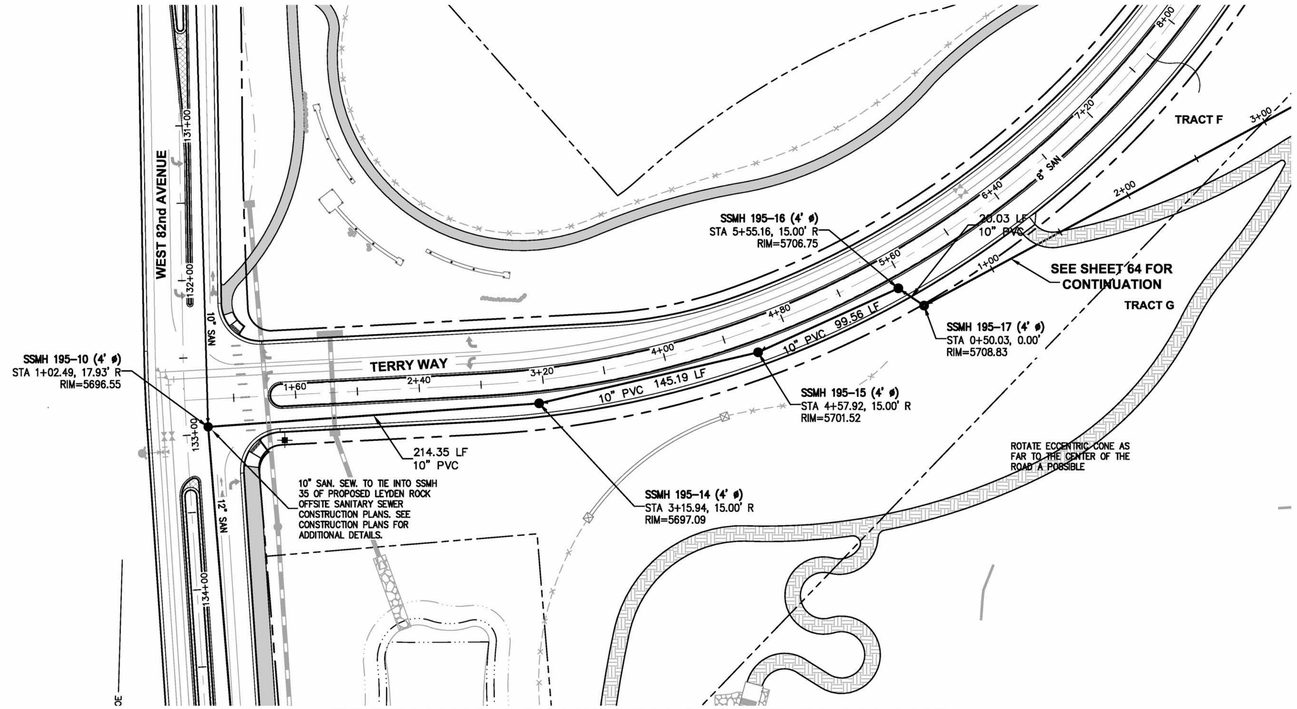
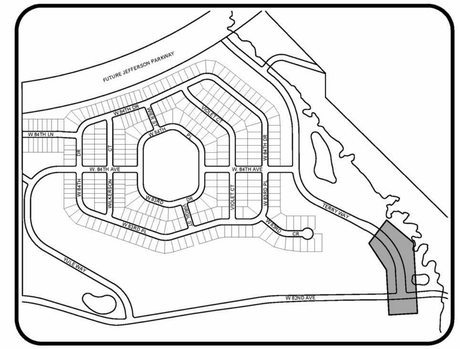
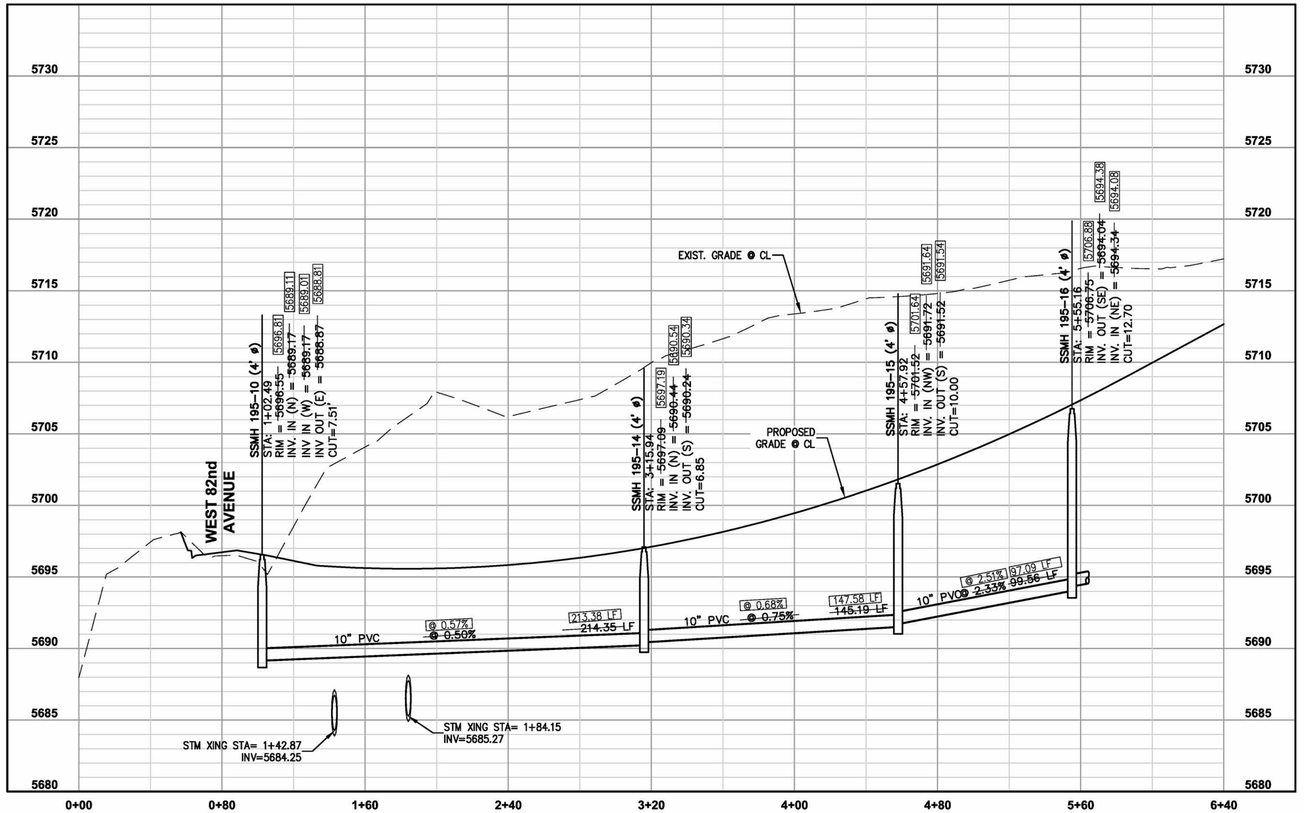




KEYMAP
N.T.S.

AS-BUILTS

TERRY WAY SANITARY SEWER PLAN AND PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED: CITY ENGINEER — DATE — JOB NUMBER 3354

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PNJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
9980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
SANITARY PLAN & PROFILE
TERRY WAY - 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 63 OF 119

J:\2036\210-054\SURVEY\ASBUILTs\ref\63-073013-F1-SS-TERRY RD-810214.dwg, 6/17/2015 9:15:24 AM

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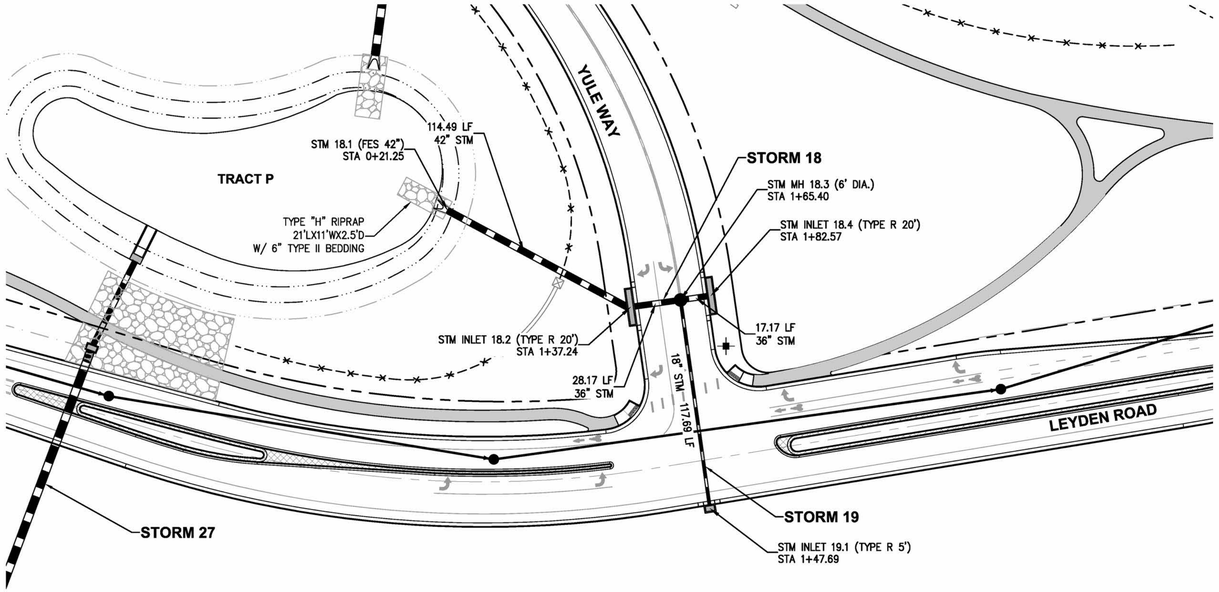

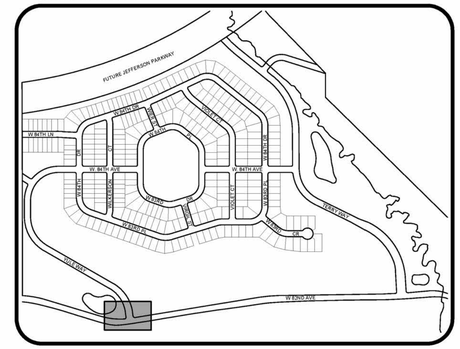

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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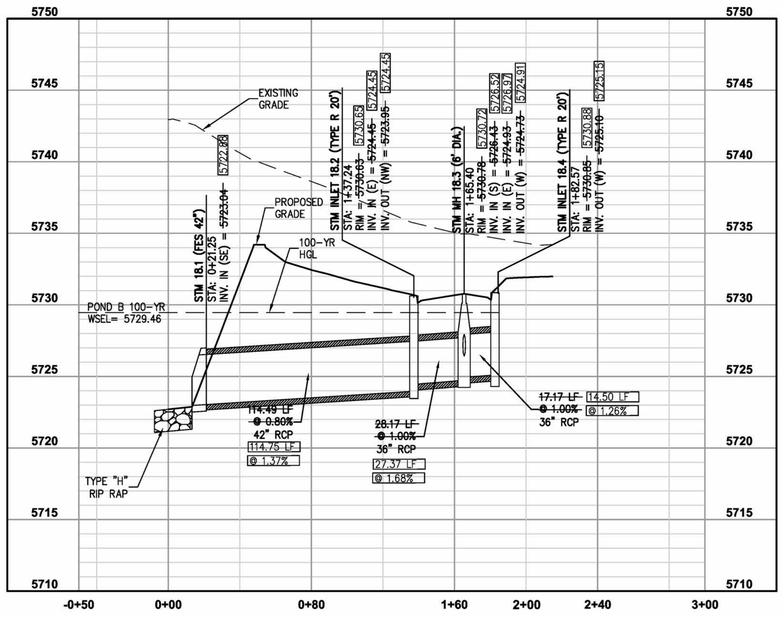
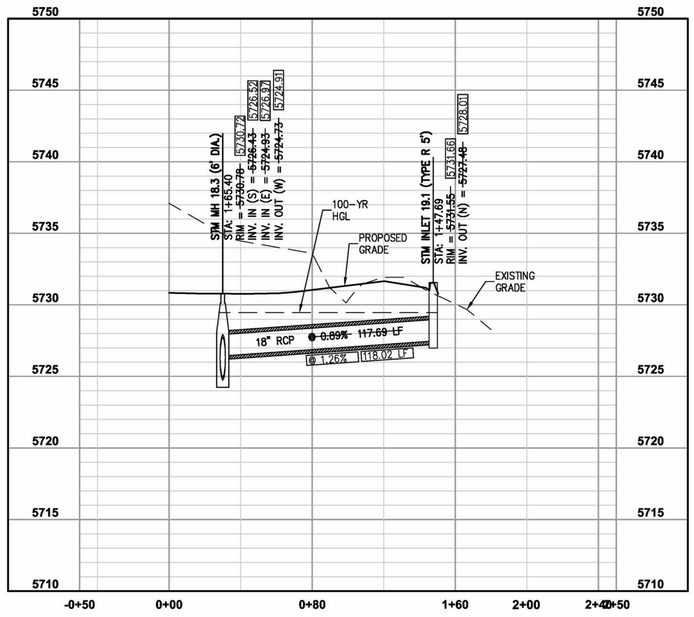
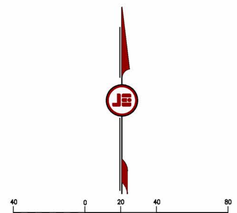
STM 18 PLAN AND PROFILE



STM 19 PLAN AND PROFILE





ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER
9-8-12
3354

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER — MARK BISHOP — 21-12 — 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-5438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 18 & 19

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 97 OF 119

J:\2036\210-054\SURVEY\ASBUILT\xref\97-080513-F1-STM-18-19-81014.dwg, 6/17/2015 10:26:25 AM

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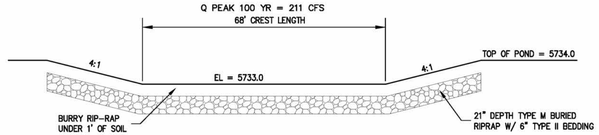
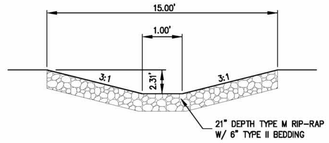


EMERGENCY OVERFLOW WIER
N.T.S.



DRAINAGE SWALE
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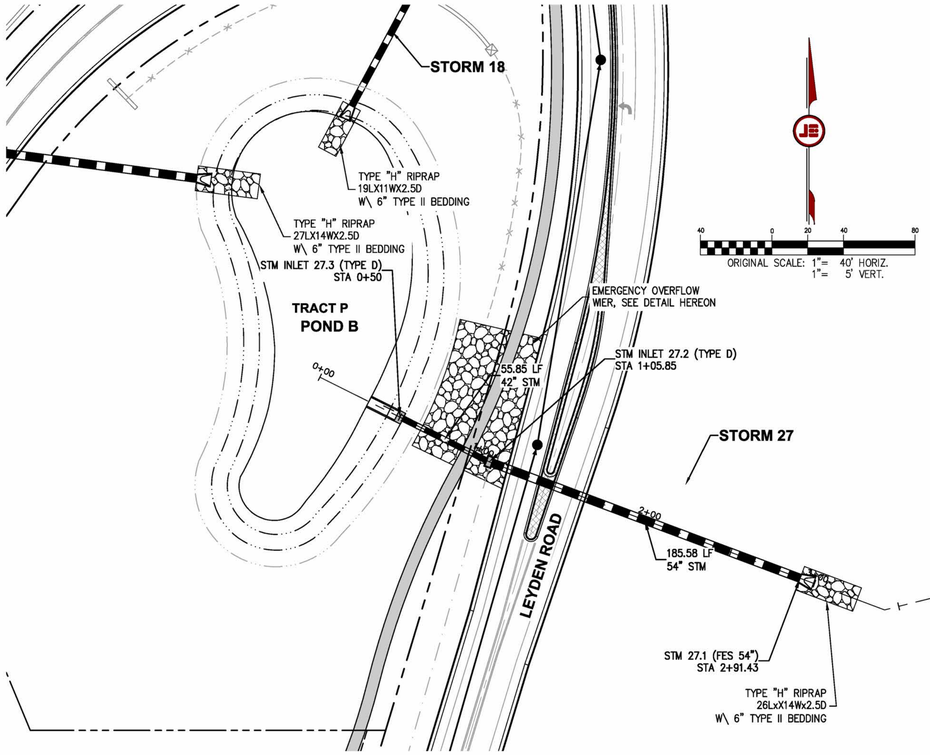
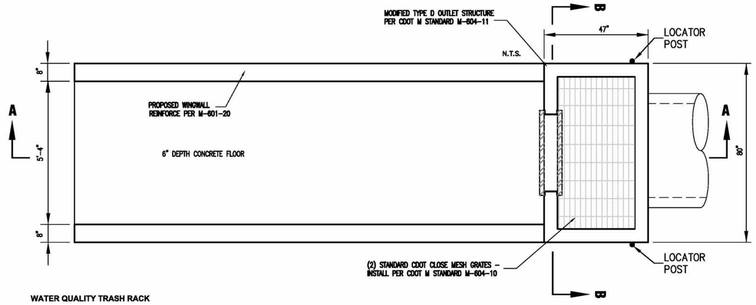
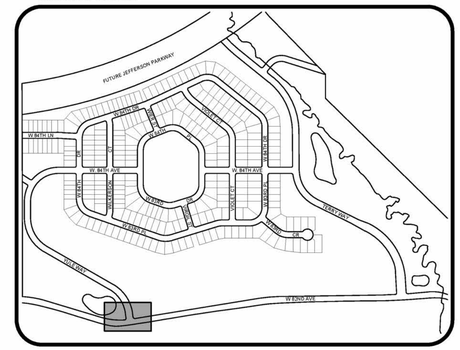


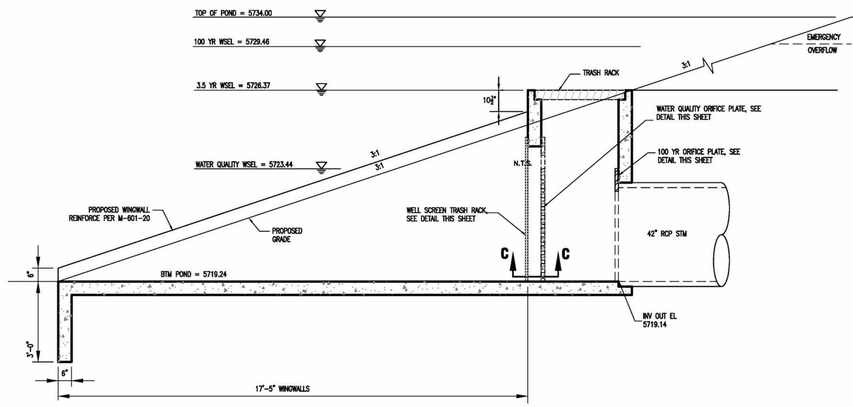


WATER QUALITY TRASH RACK
N.T.S.

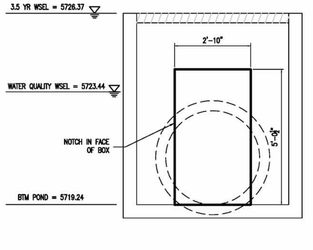
OUTLET STRUCTURE - PLAN VIEW
N.T.S.



AS-BUILTS



OUTLET STRUCTURE - SECTION A-A
N.T.S.



OUTLET STRUCTURE - SECTION B-B
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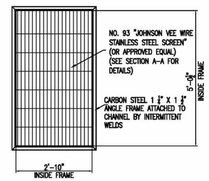

WATER QUALITY TRASH RACK
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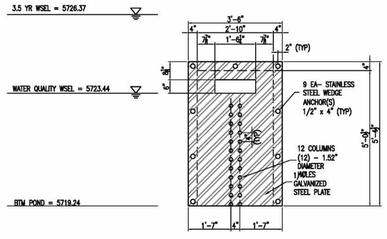

WATER QUALITY ORIFICE PLATE
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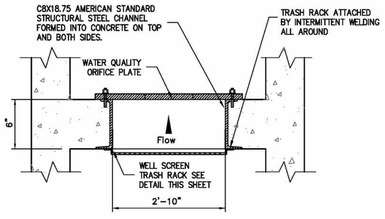
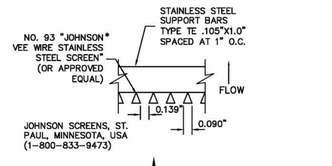
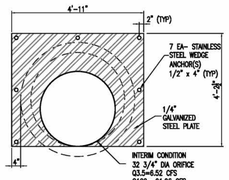


OUTLET STRUCTURE - SECTION C-C
N.T.S.



WELL SRREEN TRASH RACK DETAIL
N.T.S.



INTERIM 100 YEAR ORIFICE PLATE
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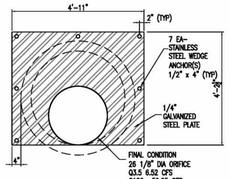
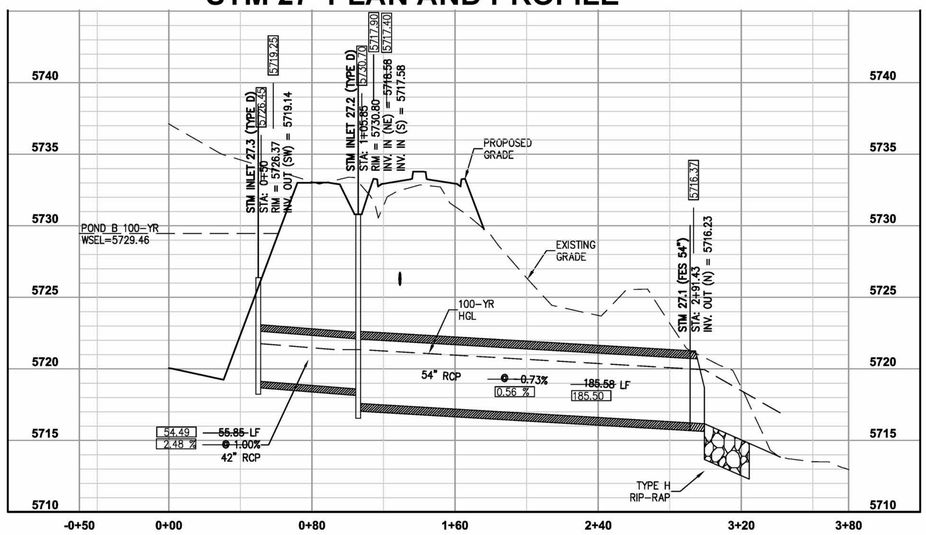


FINAL 100 YEAR ORIFICE PLATE
N.T.S.

STM 27 PLAN AND PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER — 33801 — 12-21-12

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 27 - POND B

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 104 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\104-080513-F1-STM-27-81014.dwg, 6/17/2015 10:48:54 AM

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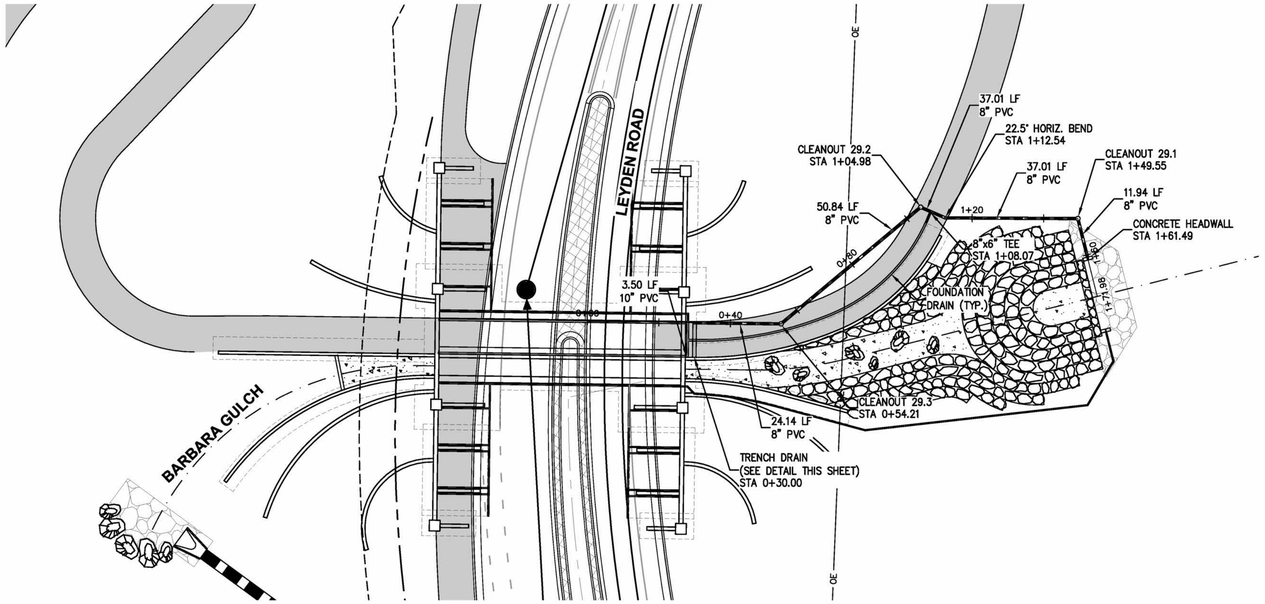
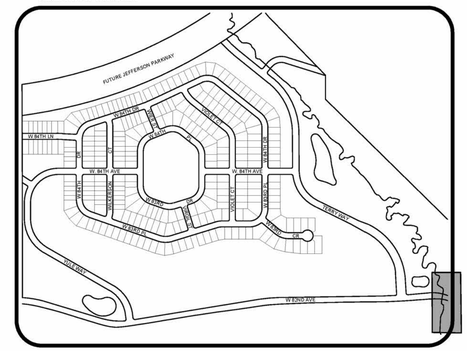






ORIGINAL SCALE: 1"= 20' HORIZ.
1"= 5' VERT.



KEYMAP
N.T.S.

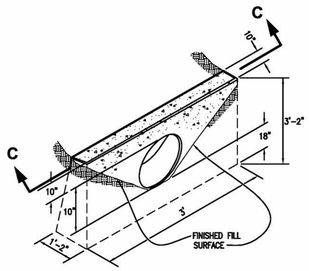
AS-BUILTS

RECORD DRAWING

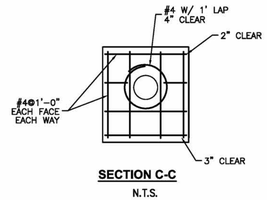
MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

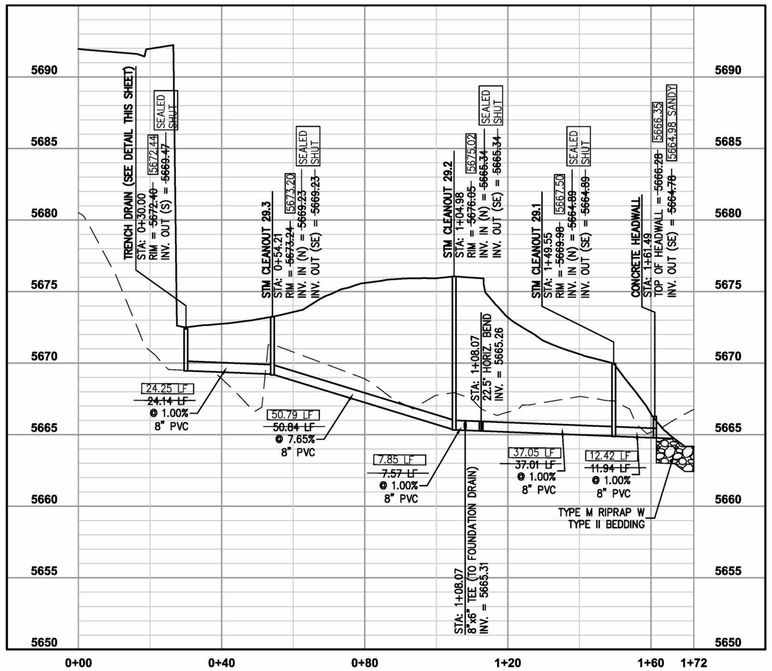
STORM 29 - PLAN AND PROFILE

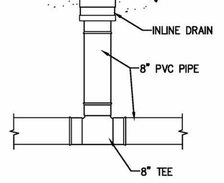


OUTLET HEADWALL DETAIL
N.T.S.

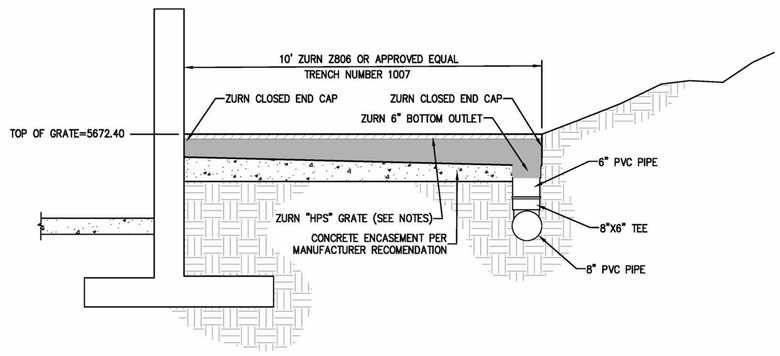


SECTION C-C
N.T.S.





CLEANOUT DETAIL
NTS



TRENCH DRAIN DETAIL
NTS

NOTES

TRENCH DRAINS SHALL BE ZERN Z806 PERMA-TRENCH OR ENGINEER APPROVED EQUAL. USE ZURN SUFFIX "HPS" GRATE - HEEL-PROOF, STAINLESS STEEL, ADA COMPLIANT.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PAU	12/15/14

REVISIONS

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 29

prepared for
RRCEA, LLC.

DRAWN BY: ----- DESIGNED BY: ----- DRAWING NAME: 2036210-0545-STM-29-81014.dwg APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 106 OF 119

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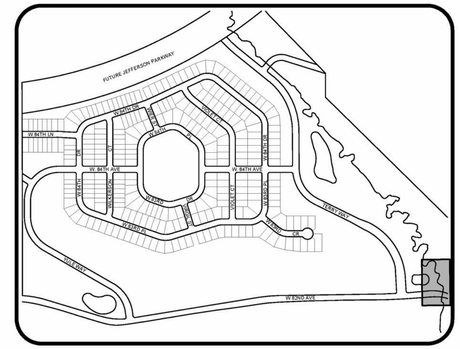
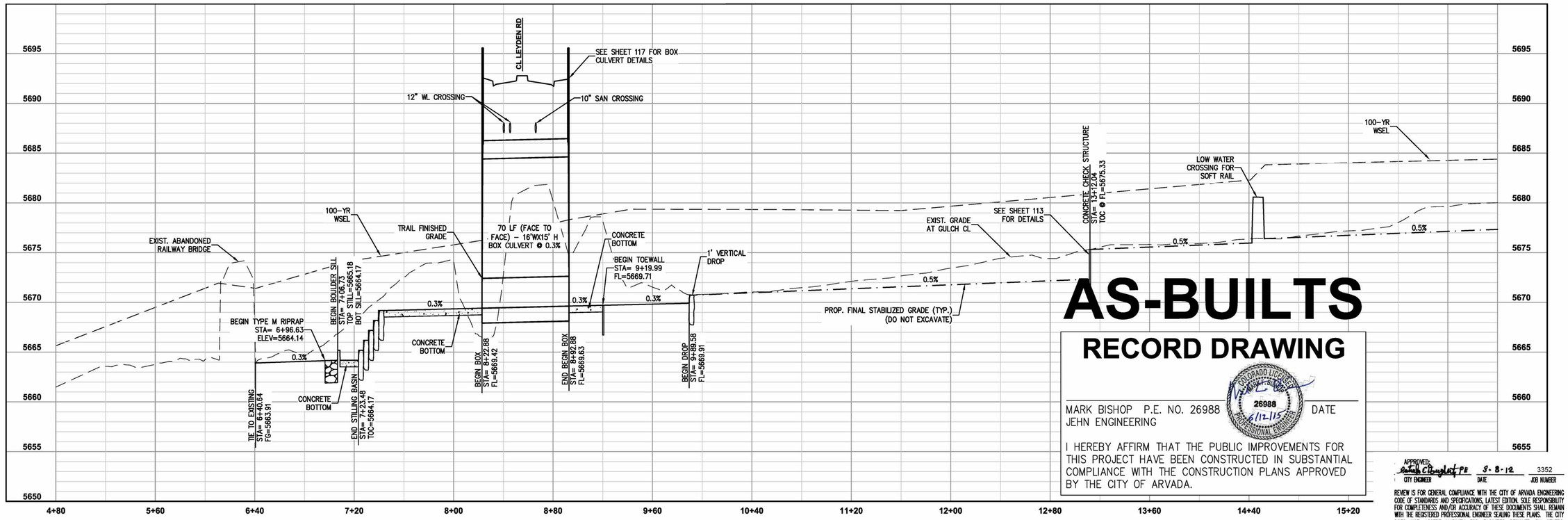


KEYMAP
N.T.S.

BARBARA GULCH NOTES:

1. BARBARA GULCH DRAINAGEWAY IMPROVEMENTS CONSTRUCTED IN ASSOCIATION WITH THE DEVELOPMENT OF THE LEYDEN ROCK SUBDIVISION SHALL BE MAINTAINED BY THE LEYDEN ROCK METROPOLITAN DISTRICT #2.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ 8-8-12 3352
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	ST	12/15/14

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 487-9438

LEYDEN ROCK FILING 1
BARBARA GULCH
PLAN & PROFILE 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: FASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 112 OF 119

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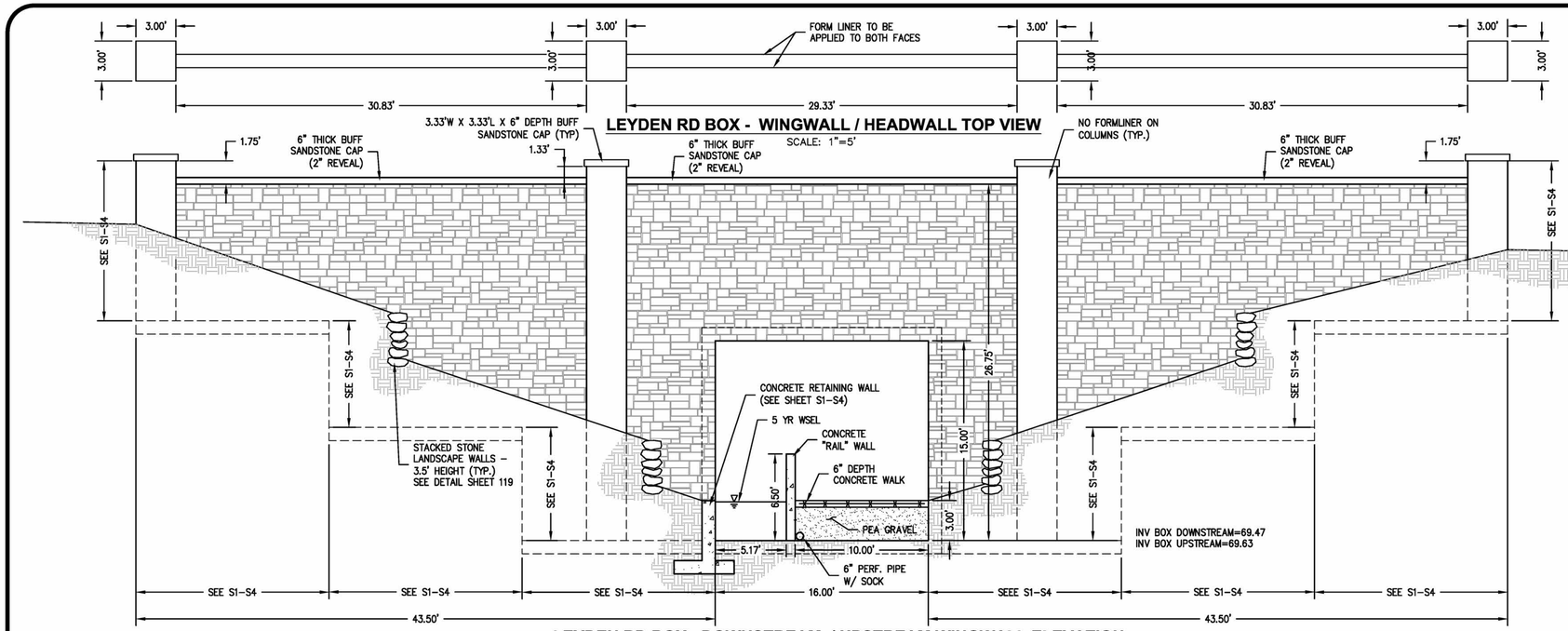

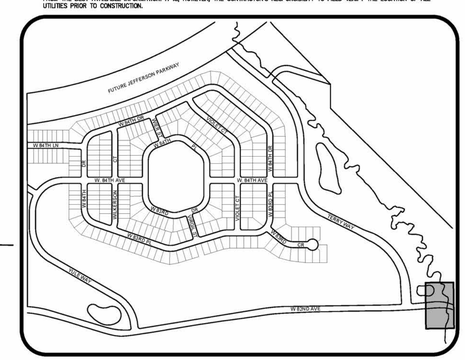

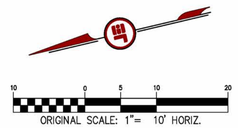

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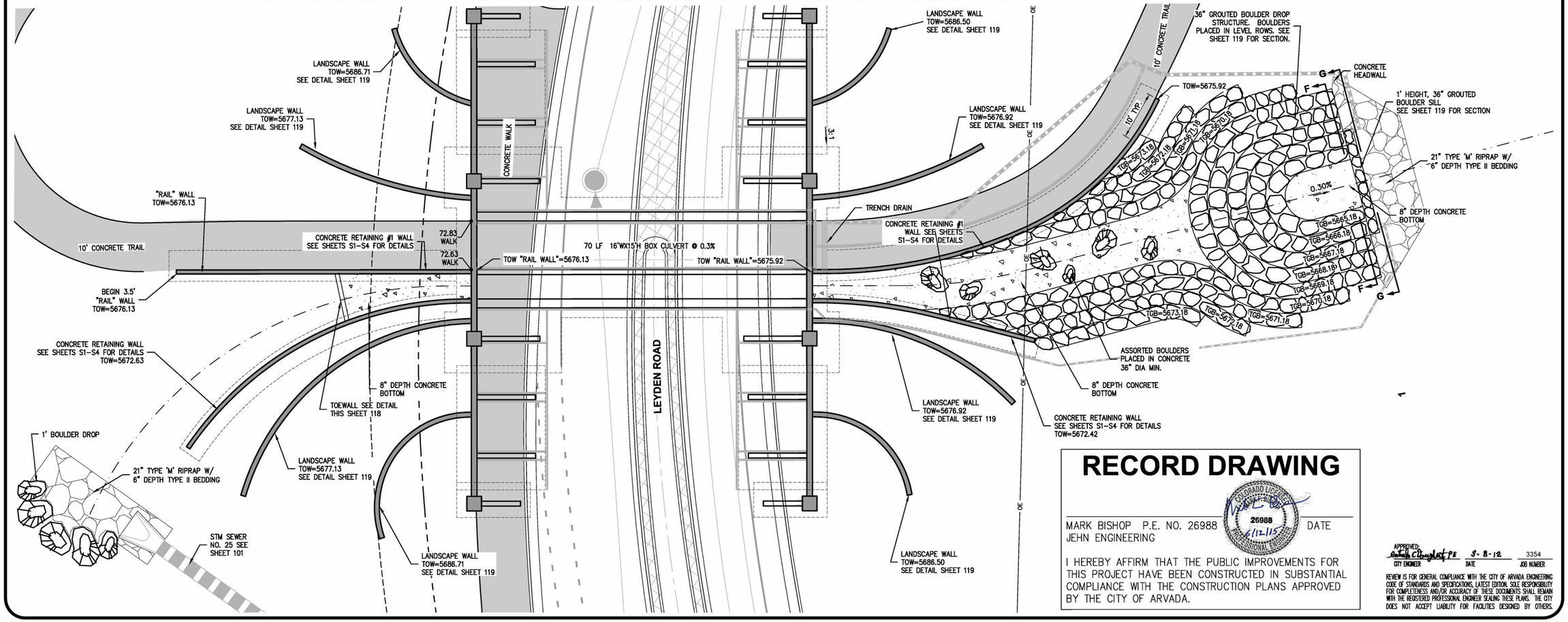
NOTE:

SEE STRUCTURAL PLANS PREPARED BY GEI INC. STRUCTURAL ENGINEERS FOR BOX CULVERT REINFORCING DETAILS,

AS-BUILTS



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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COLORADO LICENSED — 26988 — 6/12/15 — PROFESSIONAL ENGINEER

APPROVED: _____ CITY ENGINEER — 8-8-12 DATE — 3354 JOB NUMBER

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1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED — 12-15-14 — 33801 — PROFESSIONAL ENGINEER

JEHN ENGINEERING
3980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-0438

LEYDEN ROCK FILING 1
BARBARA GULCH
LEYDEN BOX CULVERT

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
----	----	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 117 OF 119

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LEYDEN ROCK

FILING NO. 2 CONSTRUCTION PLANS

**A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19, T2S, R69W,
6TH P.M. CITY OF ARVADA, COUNTY OF JEFFERSON,
STATE OF COLORADO**

LEGAL DESCRIPTION:

BLOCK 14, LEYDEN ROCK, FILING NO. 1 SUBDIVISION
62.15± ACRES

BASIS OF BEARING:

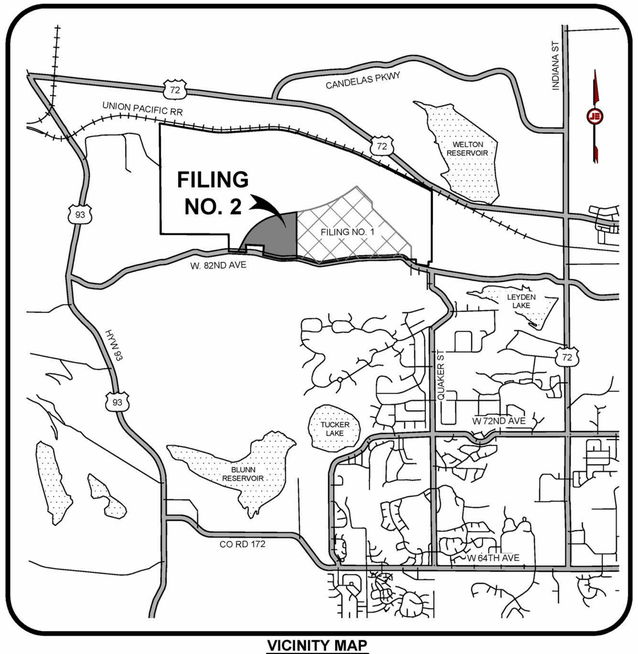
SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 27, TOWNWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M. BEARS N 88 DEGREES 45 MINUTES 01 SECONDS W

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS–DREXEL GROUP ALTA/ACSM SURVEY 7–21–06

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.



VICINITY MAP
NTS

SHEET INDEX:

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES SHEET
3	TYPICAL SECTIONS
4	OVERALL PHASING PLAN
5	PUBLIC IMPROVEMENT QUANTITIES
6	SITE UTILITY PLAN
7	OVERALL GRADING PLAN
8	DETAILED GRADING PLAN
	OVERLOT GRADING
9	OVERLOT TYPICAL SECTIONS
	SIGNAGE & STRIPING PLAN
10	SIGNING, LIGHTING & MAIL KIOSK PLAN
11	LEYDEN ROAD
	ROAD PLAN & PROFILE
12	ANTERO CT. & W. 84TH PL.
13	W. 84TH PL. - 2
14	W. 83RD DR. - 1
15	W. 83RD DR. - 2
16	W. 83RD DR. - 3
17	W. 84TH PL. - 3
18	ZIRCON ST.
19	YUCCA ST. & W. 84TH LANE
	W. 82ND AVENUE (LEYDEN ROAD)
20	PLAN AND PROFILE - 1
21	PLAN AND PROFILE - 2
22	PLAN AND PROFILE - 3
23	CROSS SECTIONS 1
24	CROSS SECTIONS 2
25	CROSS SECTIONS 3
26	CROSS SECTIONS 4
27	CROSS SECTIONS 5
	OVERALL WATER PLAN
28	WAT - 1
29	WAT - 2

SHEET NUMBER	SHEET TITLE
	SANITARY SEWER PLAN & PROFILE
30	OFFSITE SAN 1
31	OFFSITE SAN 2
32	ANTERO CT. & W. 84TH PL.
33	W. 84TH PL.
34	W. 83RD DR. - 1
35	W. 83RD DR. - 2
36	W. 84TH PL. - 3
37	ZIRCON ST.
38	YUCCA ST. & W. 84TH LN.
39	OFFSITE SAN - W. 83RD DR.
40	W. 82ND AVENUE SAN-1
41	W. 82ND AVENUE SAN-2
42	W. 82ND AVENUE SAN-3
	STORM SEWER PLAN & PROFILE
43	OFFSITE STM C1-1
44	OFFSITE STM C1-2
45	STM C1-C3
46	STM C4-C5
47	STM B1 & C7
48	POND D
49	POND H
50	STM B2, C6 & OFFSITE WQ POND

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A–100
CENTENNIAL, CO 80112
PHONE: 303–770–9111

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A–135
CENTENNIAL, CO 80112
PHONE: 303–224–9520

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8101 RALSTON RD.
ARVADA, CO 80001
PHONE: 720–898–7644
CONTACT: TIM HOOS

ENGINEER
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: MARK BISHOP

SURVEYOR
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: RAY ELKO

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE: 303–245–2219
CONTACT: RON MORTINEZ

FIRE PROTECTION
ARVADA FIRE PROTECTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001–0060
PHONE: 303–424–3012
FAX: 303–432–7995
CONTACT: STEVE STEIGLEDER

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT–OF–WAY
	PROPOSED SETBACK
	PROPOSED RIPRAP
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
S	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
100 LF 18" RCP	PROPOSED STORM SEWER LINE
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW–OFF
	PROPOSED GAS WELL HEAD
	PROPOSED WATERLINE PLUG FITTING WITH THRUST BLOCK
	PROPOSED WATERLINE ELBOW FITTING
TYPE C TYPE R	PROPOSED STORM SEWER INLET
	PROPOSED STORM SEWER FLARED END SECTION
	PROPOSED STORM SEWER MANHOLE
1.44 %	SLOPE PERCENTAGE AND DIRECTION

ABBREVIATIONS:

C&G	= CURB & GUTTER
℄ OR CL	= CENTER LINE
(106.2)	= EXISTING ELEVATION
FG	= FINISHED GRADE
℄ FL	= FLOW LINE
GB	= GRADE BREAK
HP	= HIGH POINT
INV	= INVERT ELEVATION
LP	= LOW POINT
ℙ OR PL	= PROPERTY LINE
106.02	= PROPOSED ELEVATION
ROW	= RIGHT–OF–WAY
TOC	= TOP OF CURB
TGB	= TOP OF GROUTED BOULDER
WALK	= FINISHED GRADE WALK
EOC	= EDGE OF CONCRETE
TOW	= TOP OF WALL
BOW	= BOTTOM OF WALL
AP	= ANGLE POINT
ESMT	= EASEMENT
EOA	= EDGE OF ASPHALT
EXIST.	= EXISTING
PROP.	= PROPOSED
HGL	= HYDRAULIC GRADE LINE

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
Patrick Clingerlet PE 3-8-12 3368
CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
COVER SHEET
prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: NTS
SHEET NO: 1 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILT\SET\01-0054-F2-CVR-081314.dwg, 6/15/2015 8:55:36 AM

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

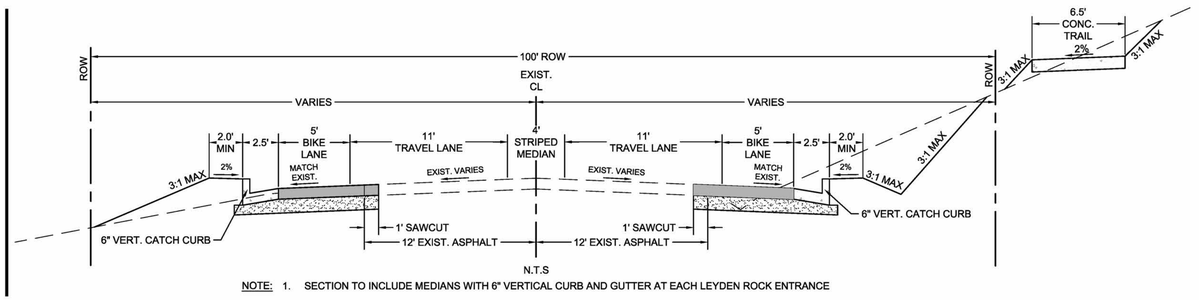
LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	NA	25' / 0.4' MIN FALL	NA

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	80
	SAG	70



NOTE: 1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT EACH LEYDEN ROCK ENTRANCE

LOCAL
(PARKING BOTH SIDES)

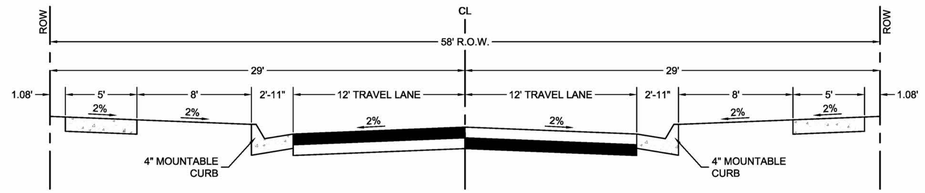
ROADS: W. 84TH LN.
YUCCA ST.
W. 83RD DR.
ZIRCON ST.
W. 84TH PL.
ANTERO CT.

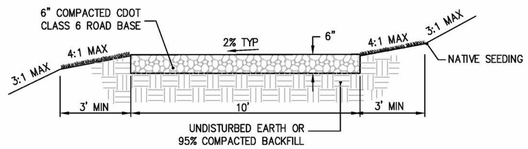
ROW WIDTH	58.0'
TRAFFIC VOLUMES	<1000 ADT
POSTED SPEED	25 - 30 MPH
MINIMUM CENTERLINE RADIUS	150.0'
MINIMUM TANGENT BETWEEN CURVES	NA
MAXIMUM GRADE	8.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	4% FOR 35'	4% FOR 100'	4% FOR 200'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	18' / 0.3' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	35 MPH DESIGN	MINIMUM
	CREST	40
	SAG	50





ACCESS MAINTENANCE ROAD DETAIL
NTS

NOTES:
1.) USE CASORON G-4, G-10 OR PENDULUM 2-G FOR WEED INHIBITOR

2.) SEE LANDSCAPE CONSTRUCTION PLANS FOR TRAIL SECTIONS.

AS-BUILTS

RECORD DRAWING

COLORADO LICENSED 26988 PROFESSIONAL ENGINEER 6/12/15

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ CITY ENGINEER
8-8-12 DATE
3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	ROJ

COLORADO REGISTERED 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6039 FAX: (303) 467-9408

LEYDEN ROCK FILING NO. 2
TYPICAL STREET SECTIONS
prepared for RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: FASBUILTS
APPROVED BY:
JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: NTS
SHEET NO: 3 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ETK\3-0054-F2-TYP STR SEC-081314.dwg, 6/15/2015 8:54:07 AM

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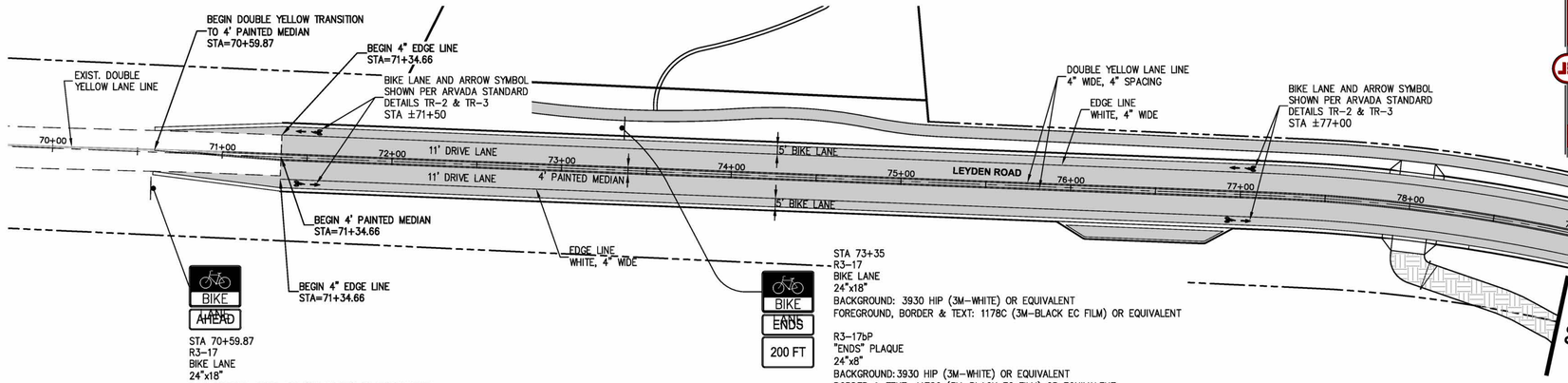


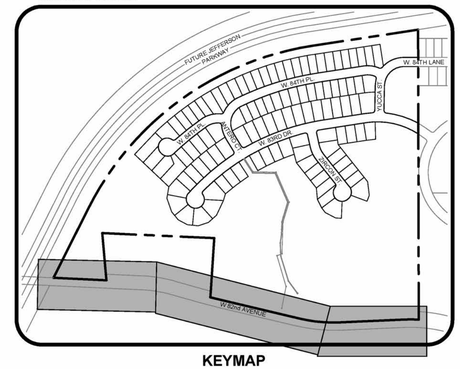
STA 70+59.87
R3-17
BIKE LANE
24"x18"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

R3-17aP
"AHEAD" PLAQUE
24"x8"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

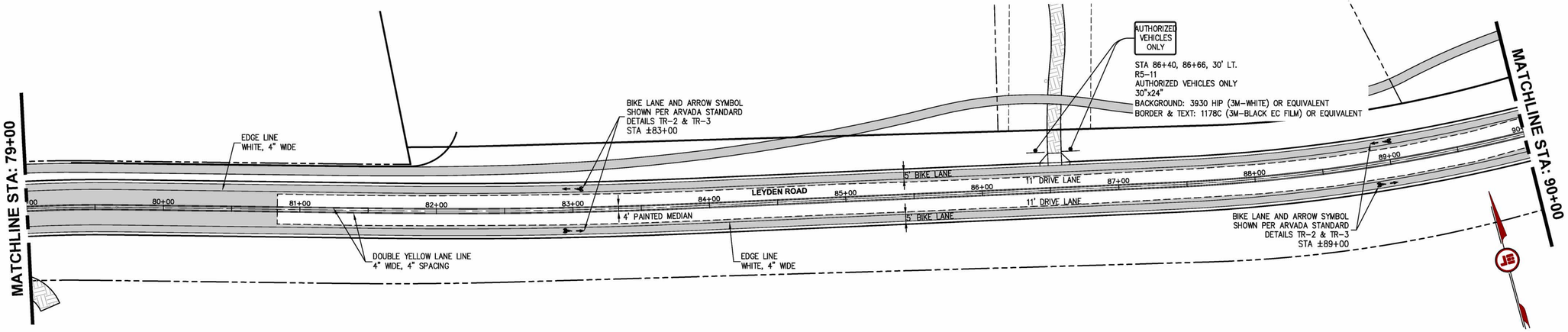
STA 73+35
R3-17
BIKE LANE
24"x18"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

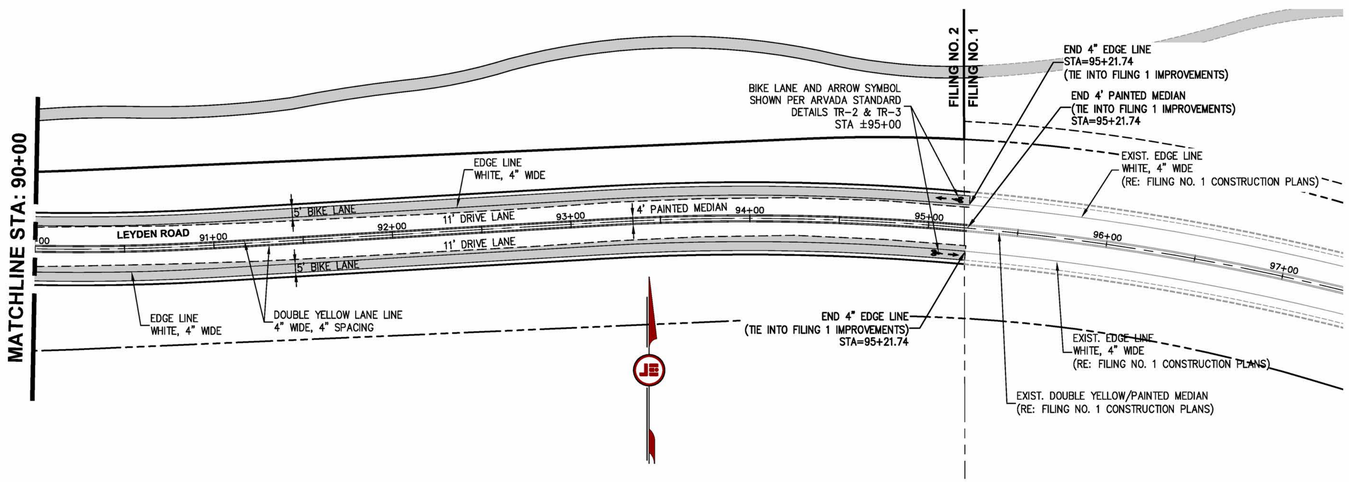
R3-17bP
"ENDS" PLAQUE
24"x8"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

W16-2aP
DISTANCE PLAQUE "200 FT"
24"x12"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT



KEYMAP
N.T.S.





40 0 20 40 80
ORIGINAL SCALE: 1"= 40' HORIZ.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-3M TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE AND STRIPING TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
5. LEYDEN STATIONING BASED ON LEYDEN ROAD PROPOSED CL ALIGNMENT.
6. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-2.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER THE ARVADA STANDARD TR-3.

APPROVED: _____ 8-8-12 3111
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5960 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

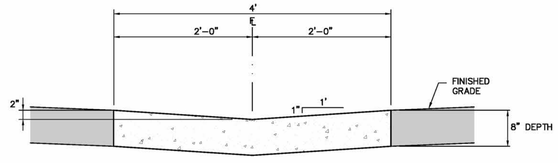
LEYDEN ROCK FILING NO. 2
SIGNING & STRIPING PLAN
LEYDEN ROAD

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: H:\594\2\ASBUILTS\SIGN.dwg
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 50'
SHEET NO: 11 OF 50

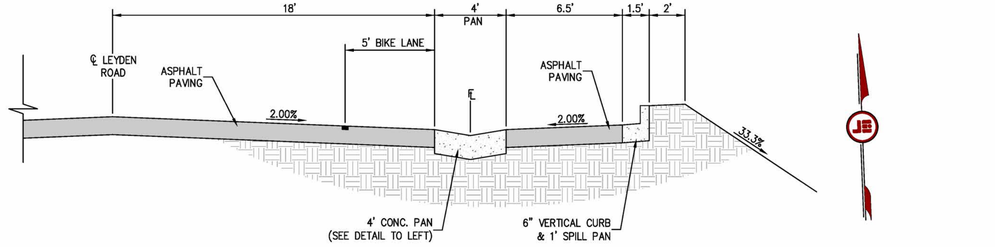
J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ST11-0054-F2-LR-SIGST-081314.dwg, 6/15/2015 9:17:45 AM



DETAIL NOTES:
1.) 1.5 LBS/CY FIBERMESH REQUIRED IN CONCRETE PAN
2.) CONTROL JOINTS PLACED AT 10' O.C.

4' CONCRETE PAN DETAIL

NTS



SECTION A-A

NTS

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

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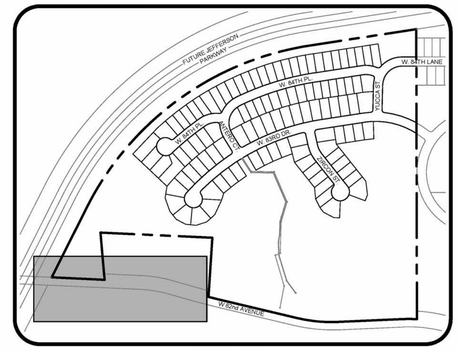
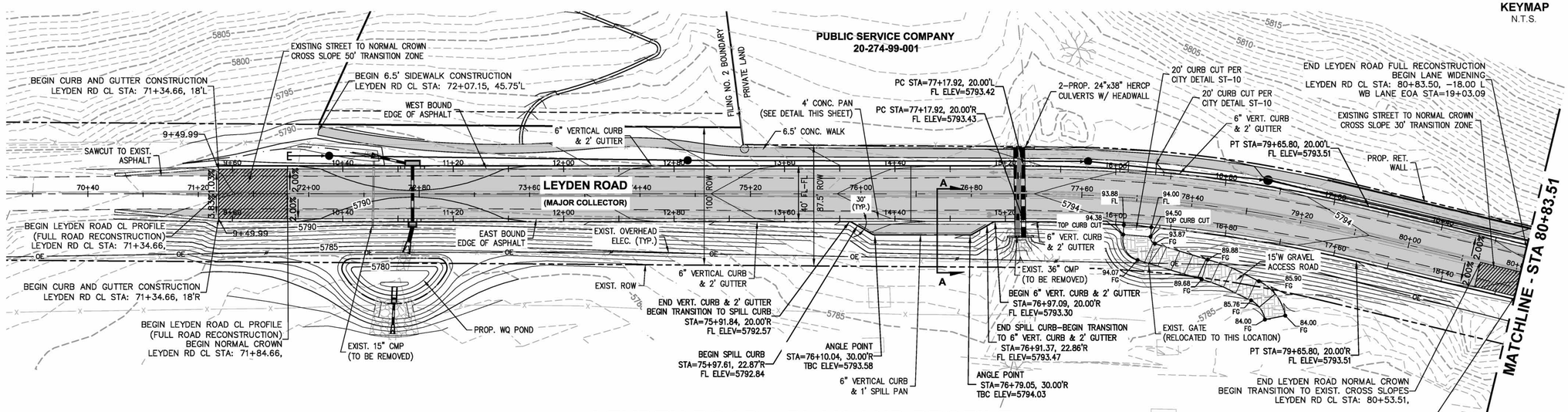
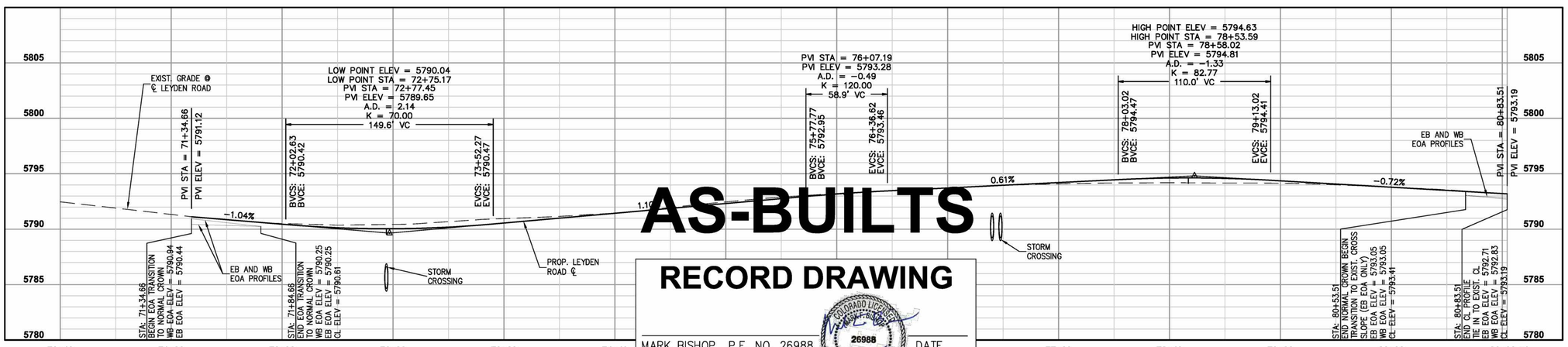


KEYMAP
N.T.S.



LEYDEN ROAD ℄ PLAN AND PROFILE
STA 70+40.00 TO 80+83.51



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
CITY ENGINEER — DATE: 8-8-12 — 3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

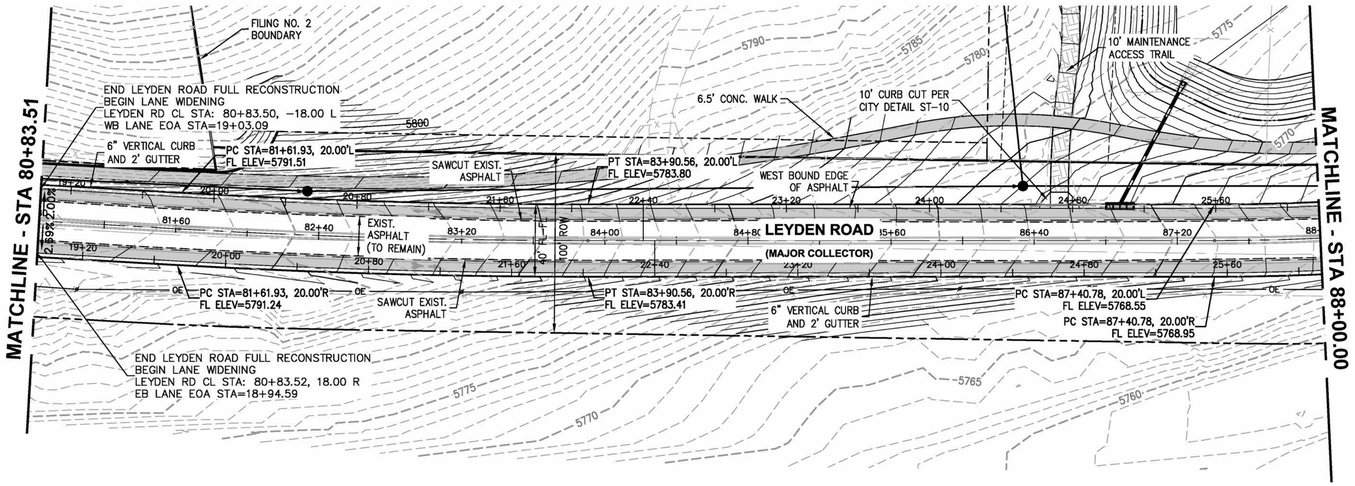
LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 1

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 20 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\TSTEN\20-00541-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:26:45 AM



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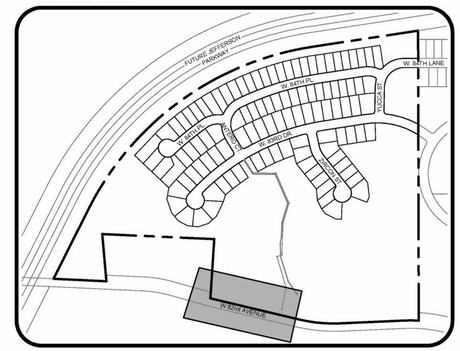
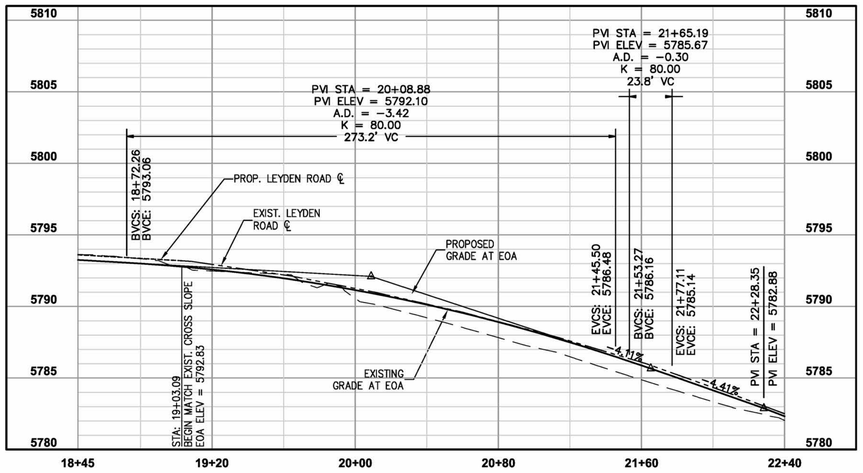
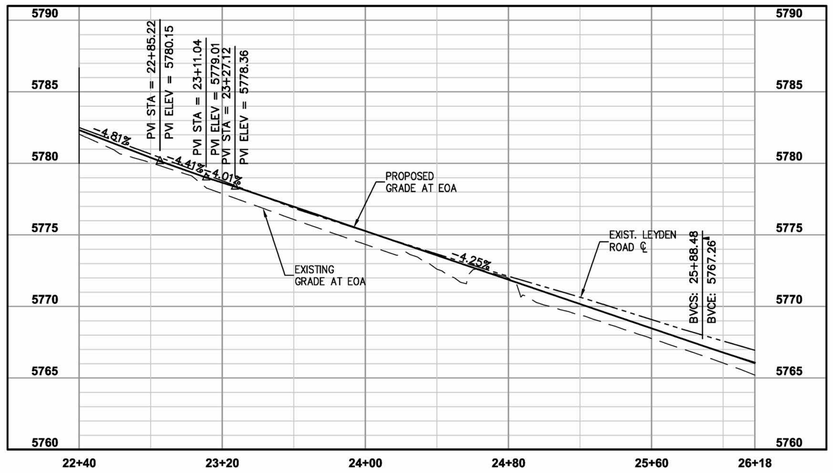


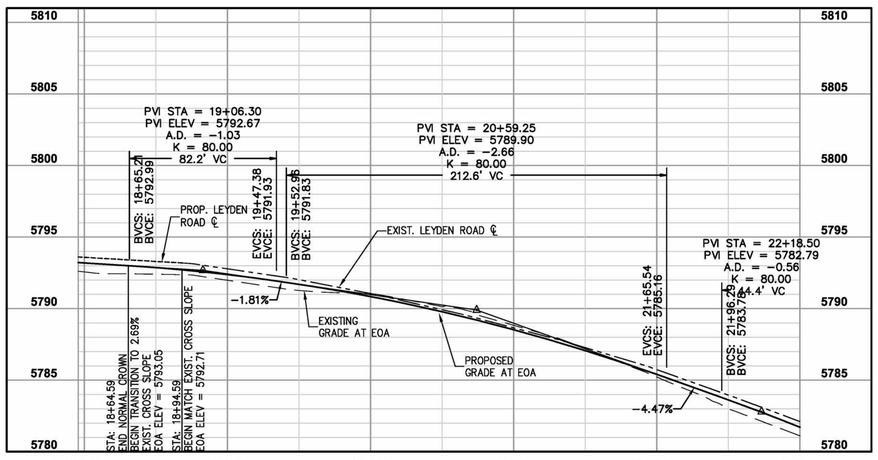
KEYMAP
N.T.S.

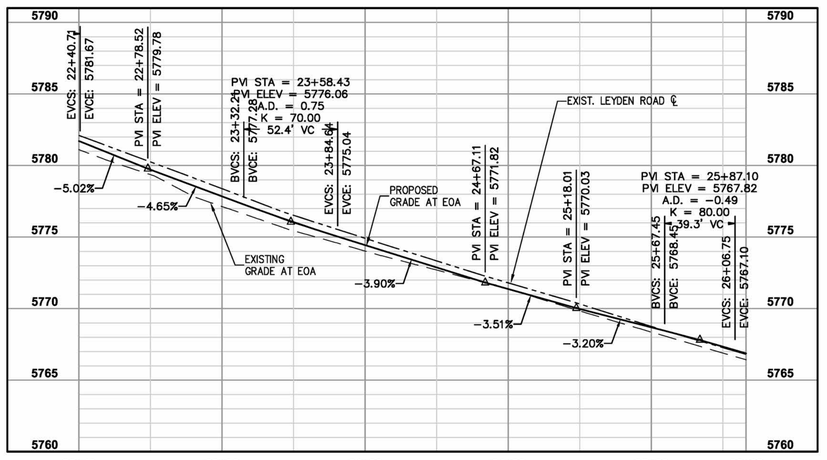
WEST BOUND LANE EDGE OF ASPHALT PROFILE





EAST BOUND LANE EDGE OF ASPHALT PROFILE





AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ CITY ENGINEER — 8-8-12 DATE — 3111 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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for marking of underground member utilities.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
8680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-8208 FAX (303) 467-8438

LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 2

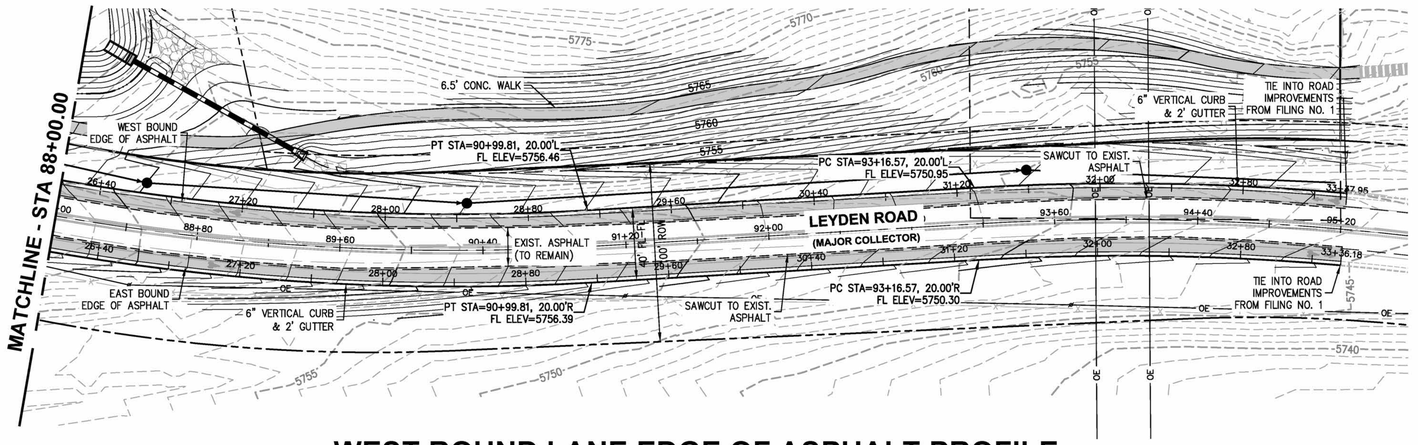
prepared for
RRCEA, LLC.

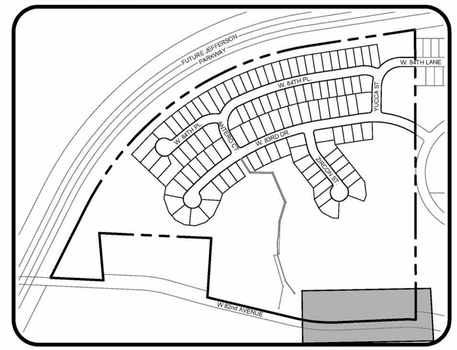
DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
BSS	BSS	P2-ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 21 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SUR\EYASBUILTSET\21-00S4-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:29:15 AM

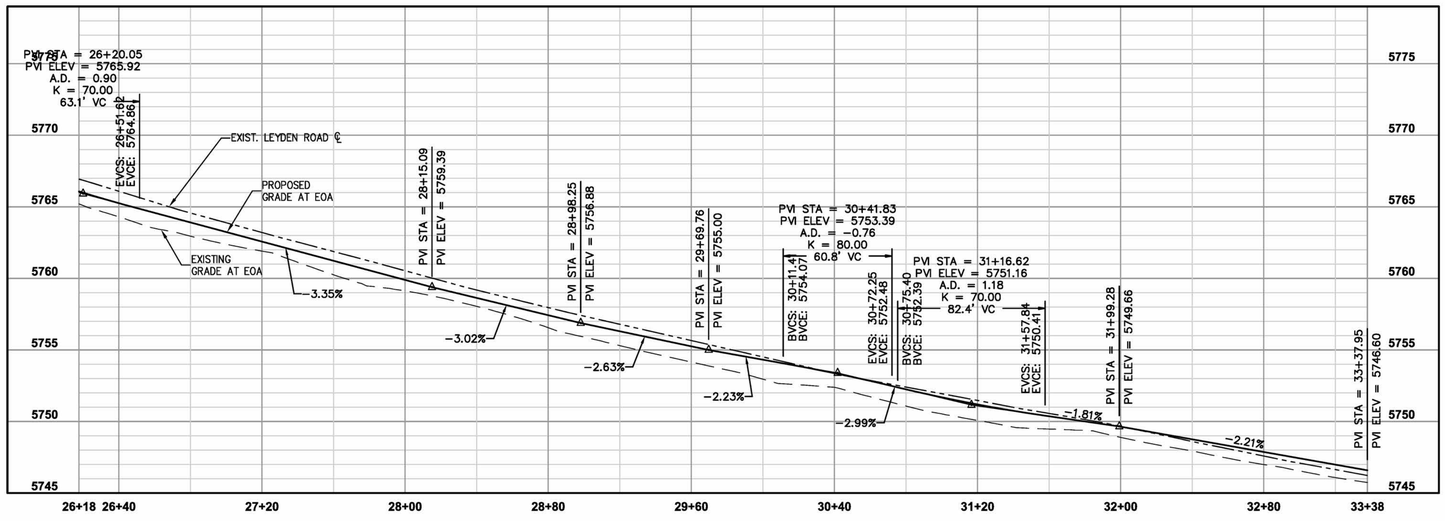
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



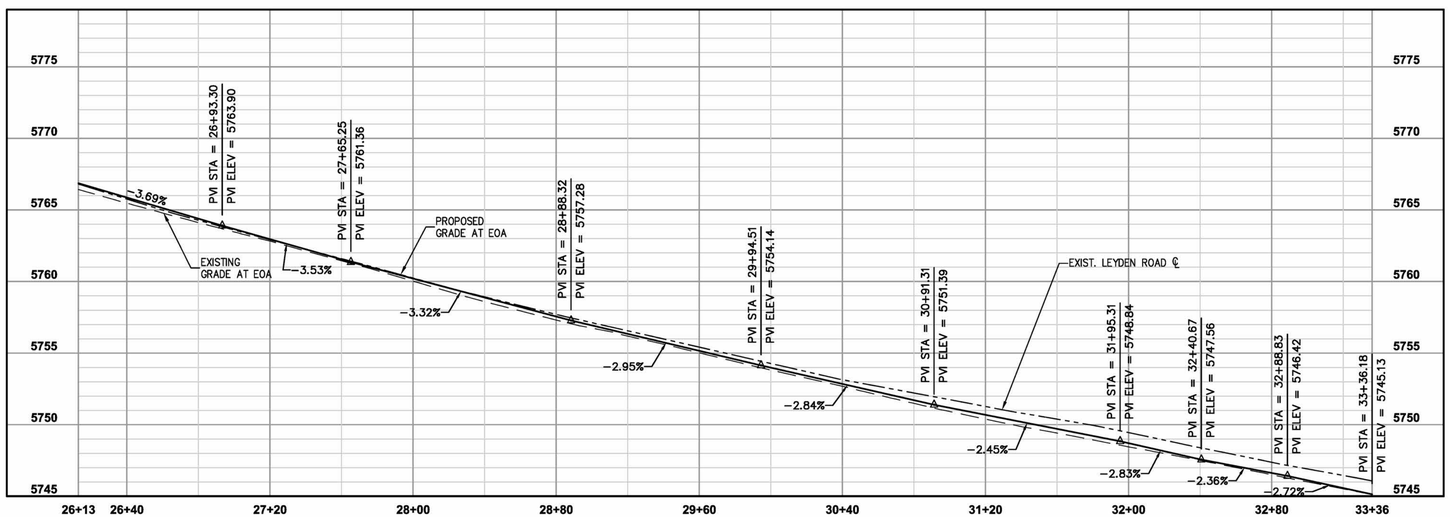


KEYMAP
N.T.S.

WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
CITY ENGINEER — DATE: 8-8-12 — JOB NUMBER: 3111

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDU

ORIGINAL SCALE: 1"= 40' HORIZ. 1"= 5' VERT.

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 3

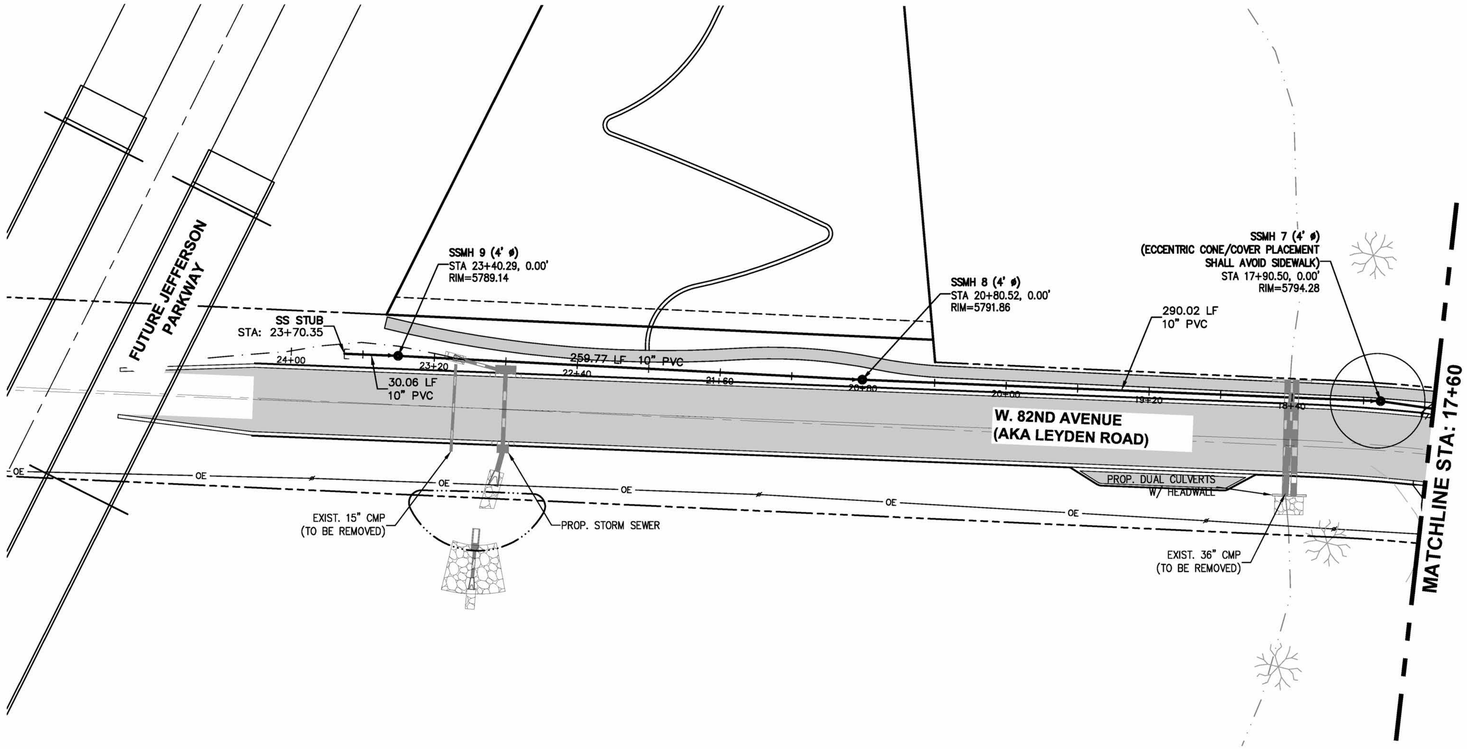
prepared for
RRCEA, LLC.

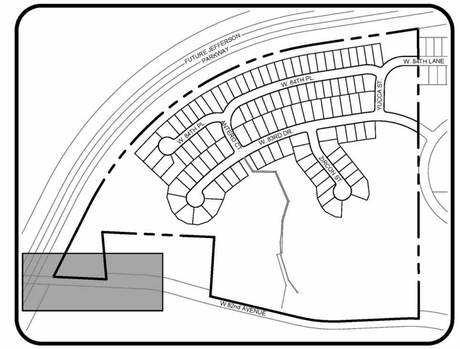
DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 22 OF 50

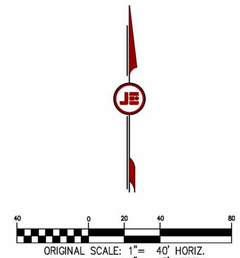
J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ET\22-0054-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:36:05 AM

JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



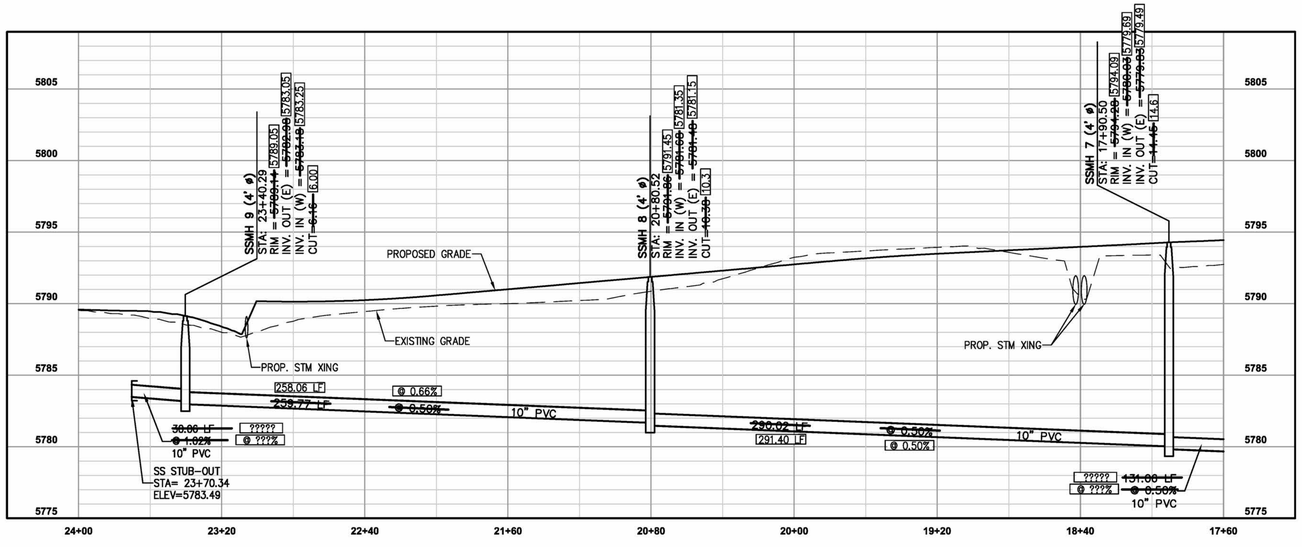


KEYMAP
N.T.S.



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED:
CITY ENGINEER — DATE: 3-8-12 — JOB NUMBER: 3111

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
9980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 1

prepared for
RRCEA, LLC

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
BSS	BSS	P2ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 40 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILT\SET1\40-0054-F2-82ND AVE SAN-081314.dwg, 6/15/2015 10:28:03 AM

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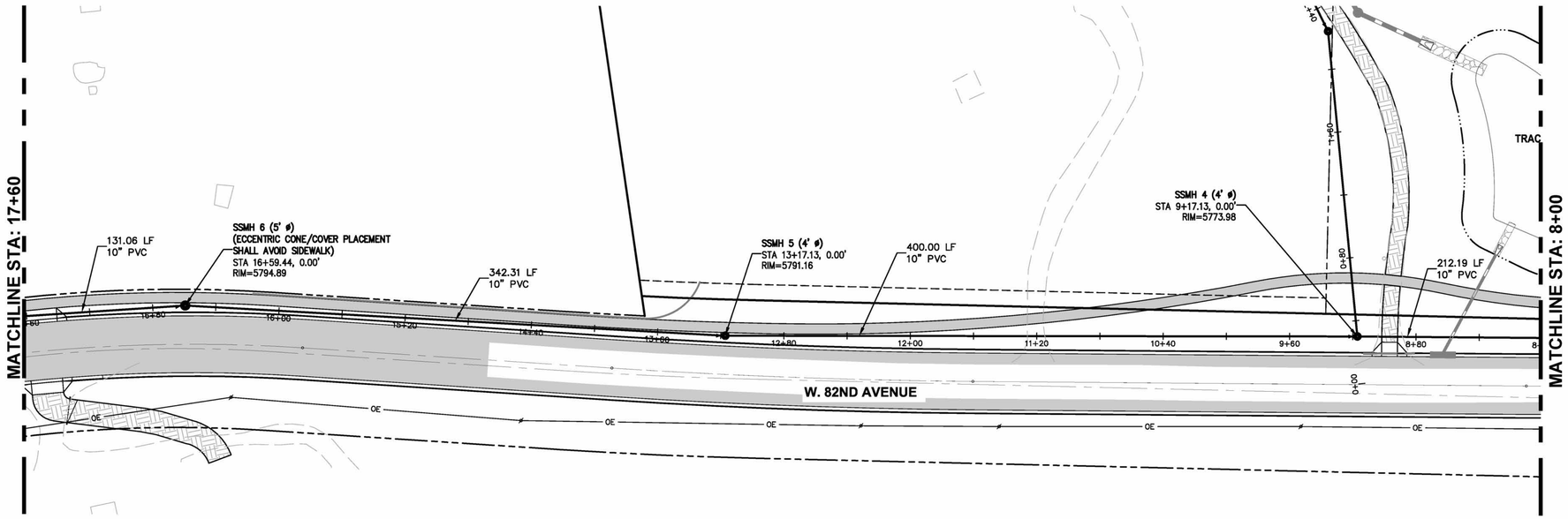

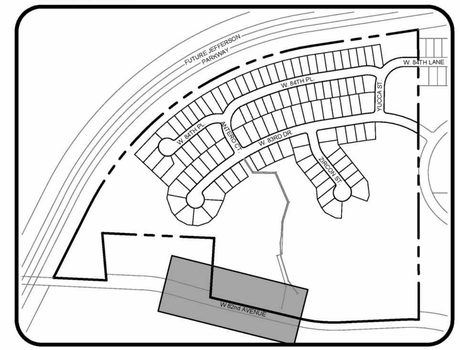

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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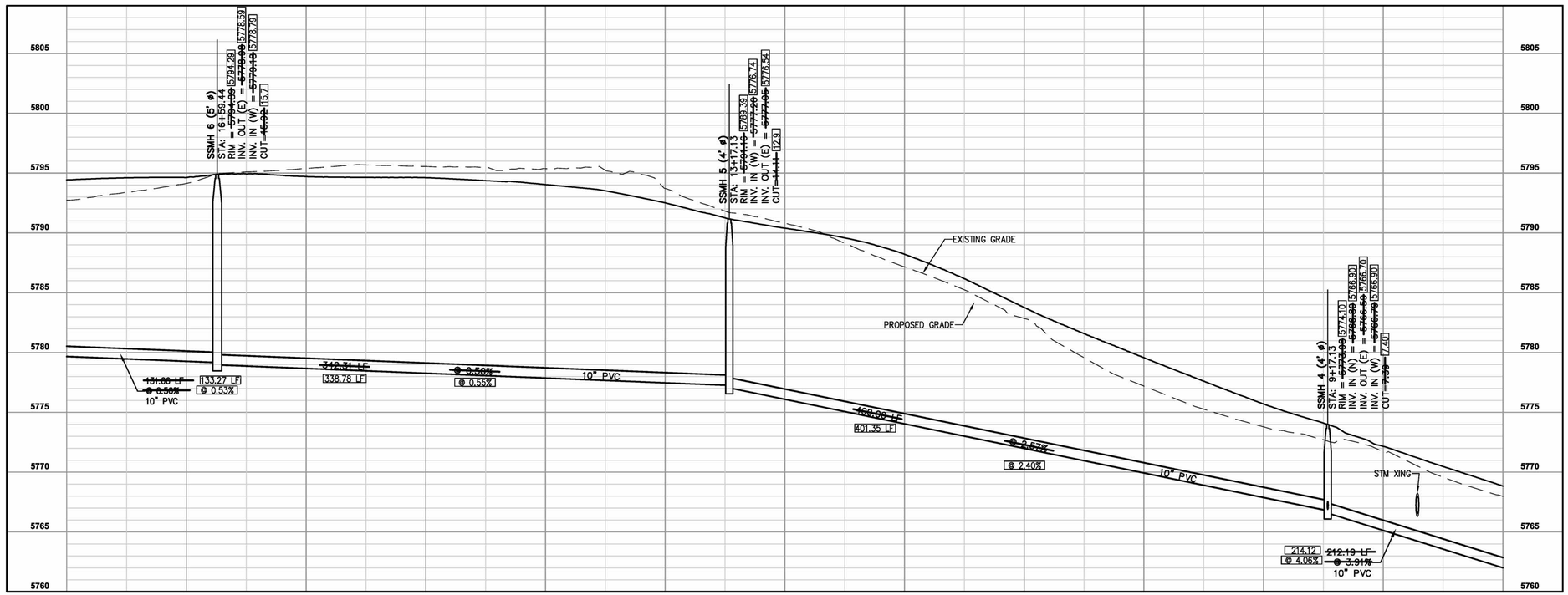
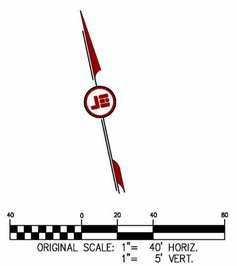
W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE





NOTES

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APPROVED:
CITY ENGINEER — DATE 8-8-12 — 3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 2
prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: PASBUILTS
APPROVED BY:
JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 41 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SUR\EYASBUILTS\EYL41-0054-F2-82ND AVE-SAN1-081314.dwg, 6/15/2015 10:27:10 AM

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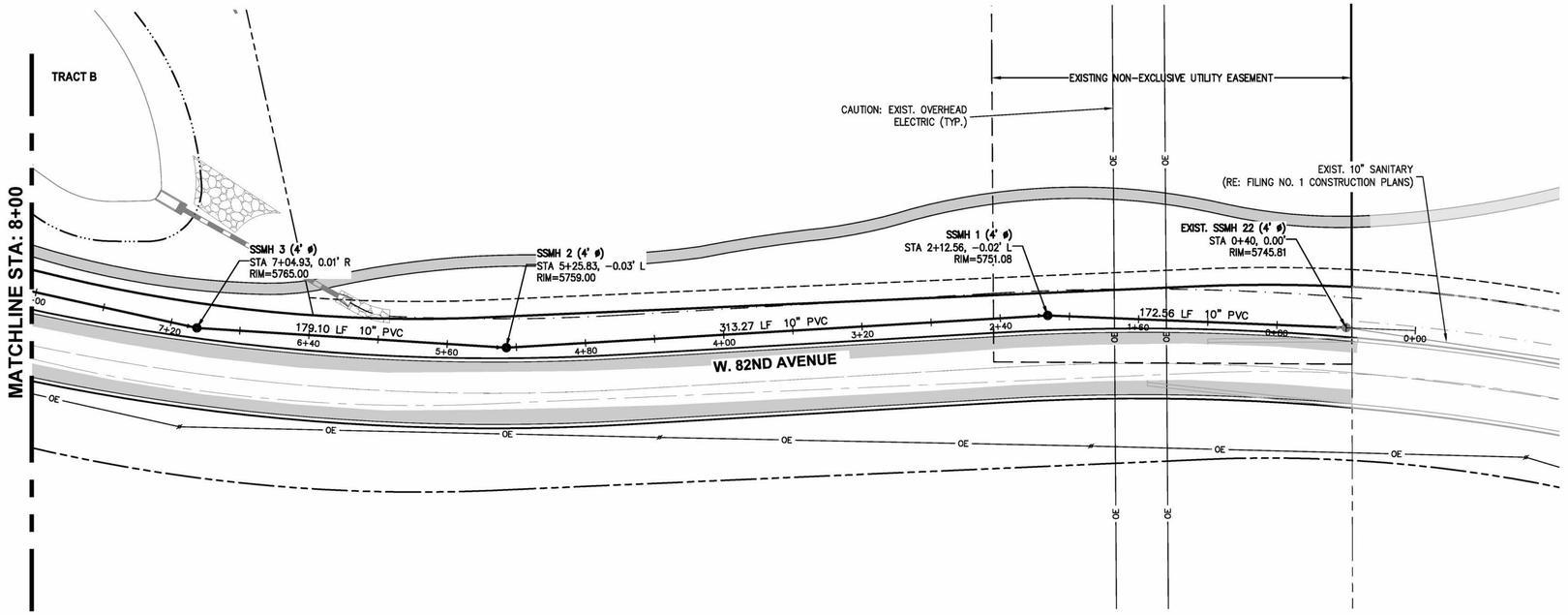
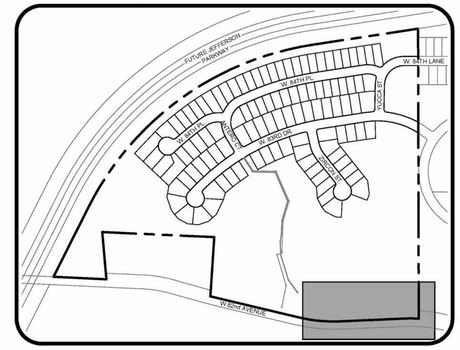
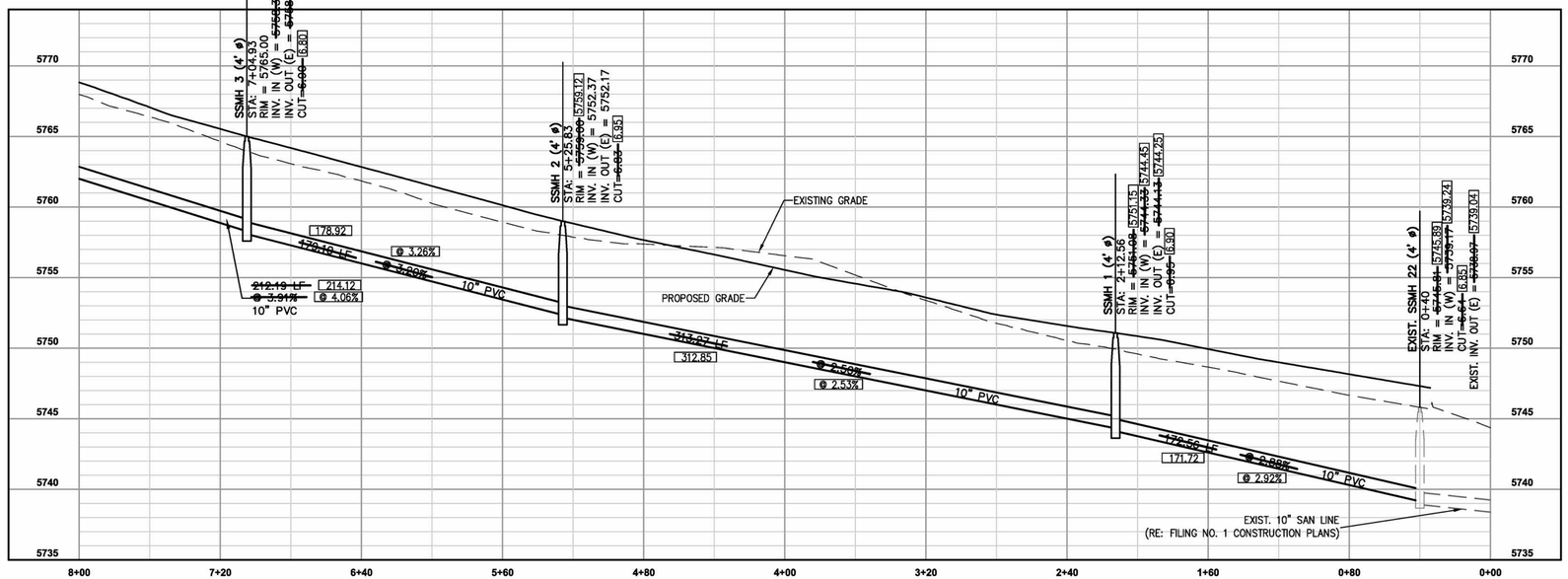




KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3111

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-0438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 3
prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
BSS	BSS	FASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 42 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ET\42-0054-F2-82ND AVE-SAN-081314.dwg, 6/15/2015 10:26:23 AM

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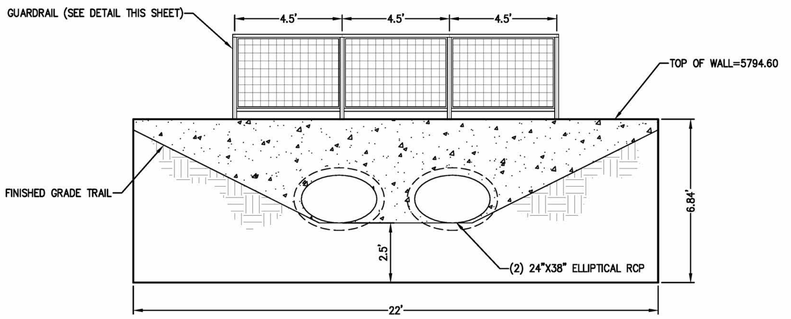
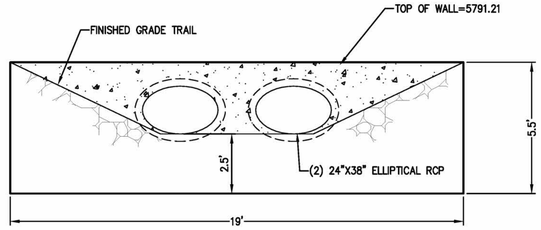
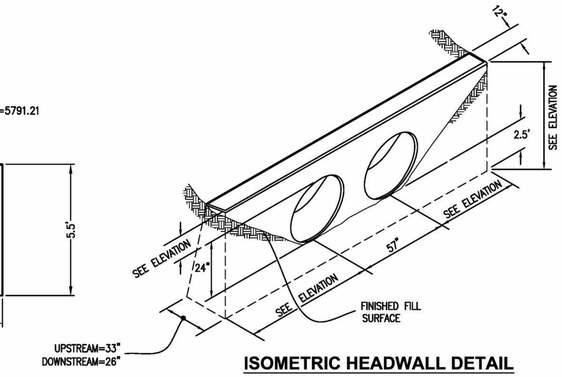


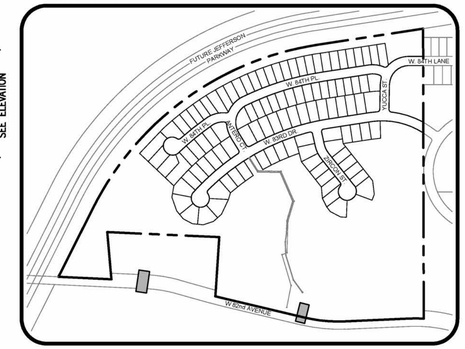
UPSTREAM HEADWALL ELEVATION
1"=3'



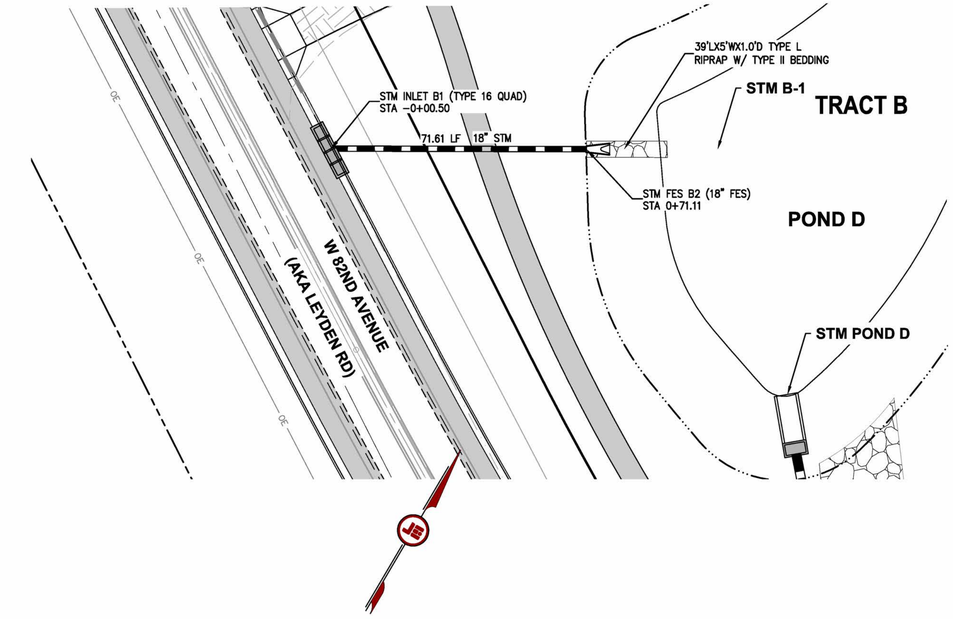
DOWNSTREAM HEADWALL ELEVATION
1"=3'



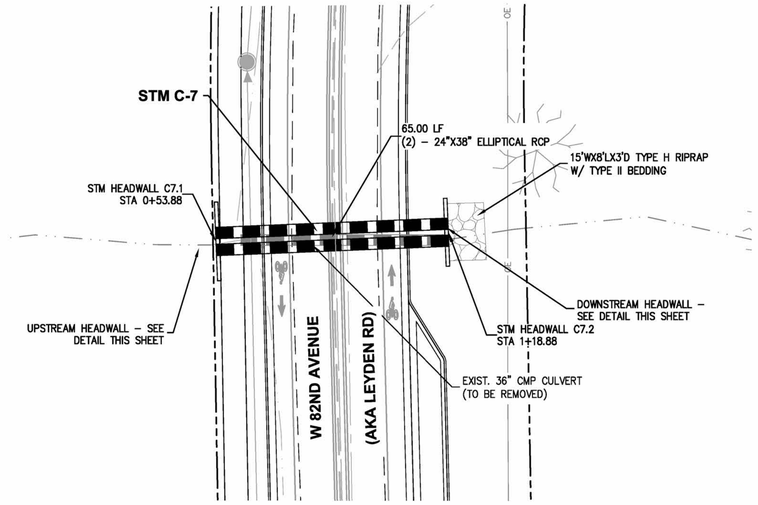
ISOMETRIC HEADWALL DETAIL
N.T.S.



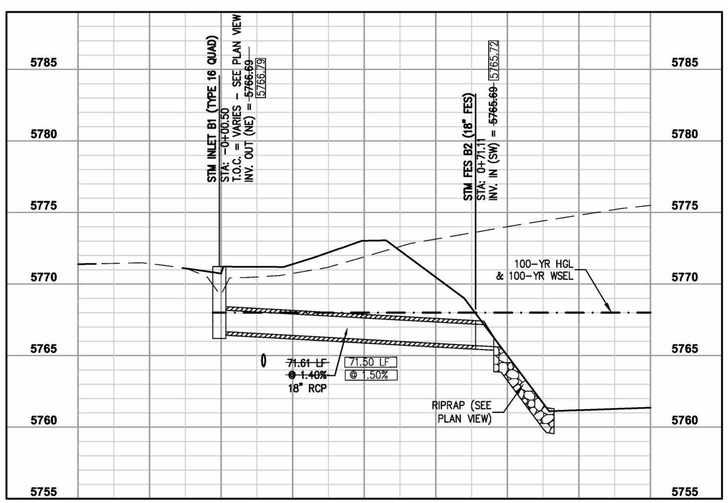
KEYMAP
N.T.S.

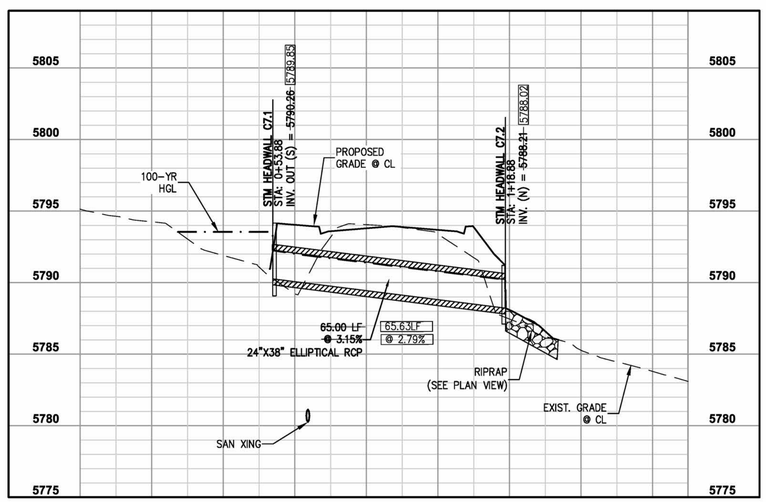


STM B-1

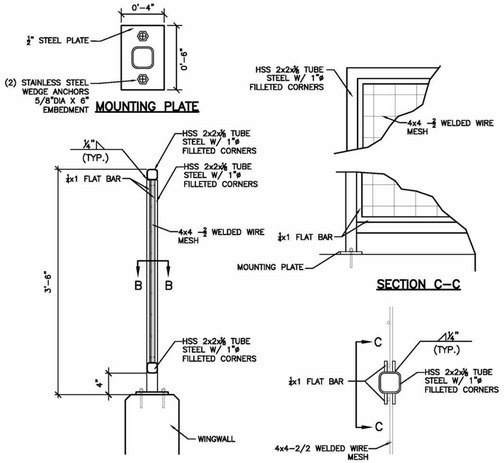


STM C7





20 0 10 20 40
ORIGINAL SCALE: 1"= 20' HORIZ.
1"= 5' VERT.



GUARDRAIL DETAIL
N.T.S.
NOTE: PAINT COLOR = BLACK

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

GENERAL NOTES

1. SEE CDOT STANDARD PLAN M-601-12 FOR GENERAL HEADWALL INFORMATION.
2. SEE CDOT STANDARD PLAN M-601-10 FOR REINFORCING OF HEADWALLS.
3. BACKFILL FROM HEADWALL TO HEADWALL WITH CLASS 1 STRUCTURAL FILL.

APPROVED: _____ CITY ENGINEER
8-8-12 DATE
3111 JOB NUMBER

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SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2–business days in advance before you dig. DigSafely. 1-800-922-1987 www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY PURPOSE WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDU

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING JE
5980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

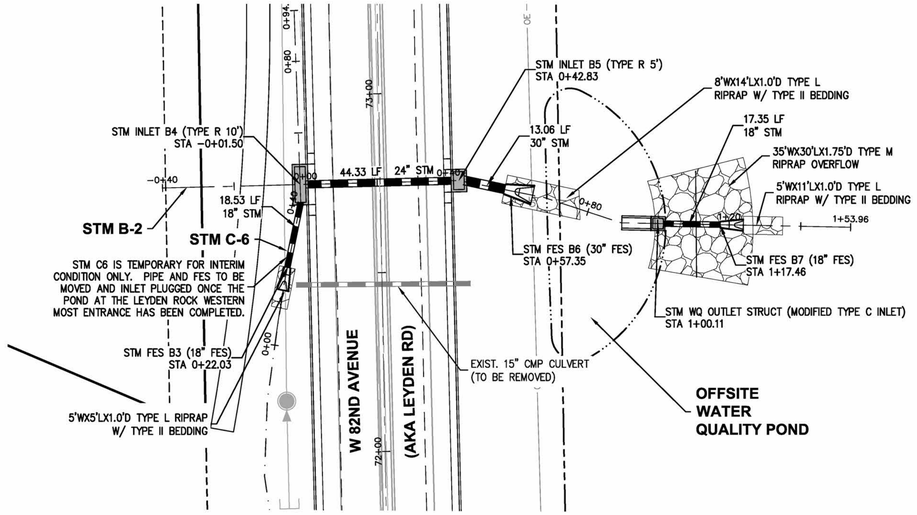
LEYDEN ROCK FILING NO. 2
STORM SEWER PLAN & PROFILE
STM B1 & C7

prepared for
RRCEA, LLC.

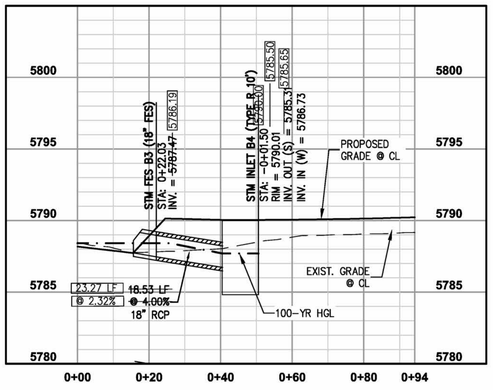
DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
BSS	BSS	F2ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 50'
SHEET NO: 47 OF 50

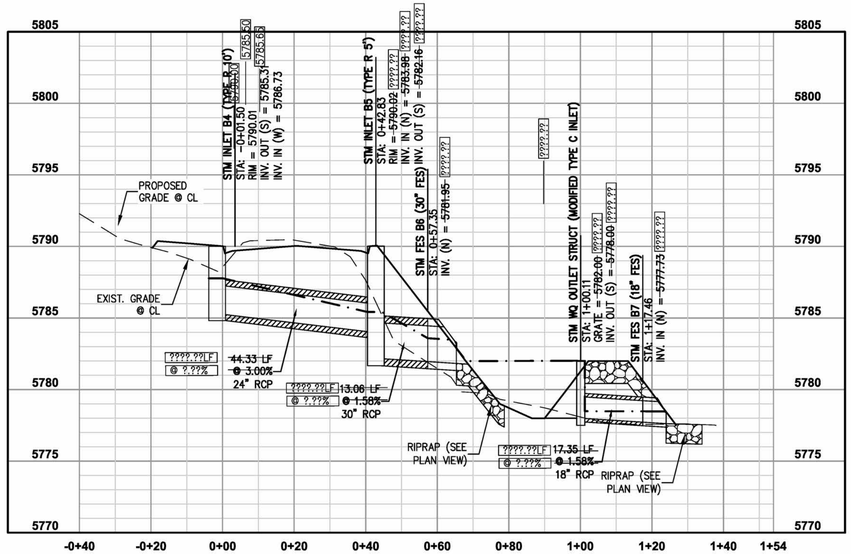
J:\2036\LEYDEN ROCK\211-074\F3-FDP\SUB\REVEYA\SUB\LTSET\47-0054-F2-B1&C7-STM-081314.dwg, 6/15/2015 10:38:35 AM

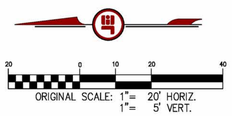


STM C6



STM B2





AS-BUILTS

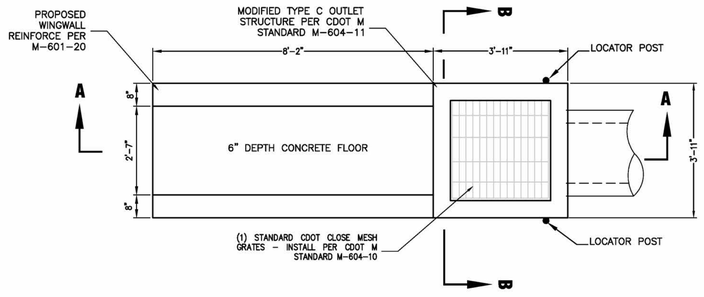
RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

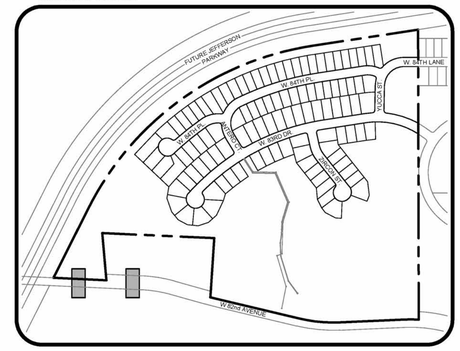
DATE

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

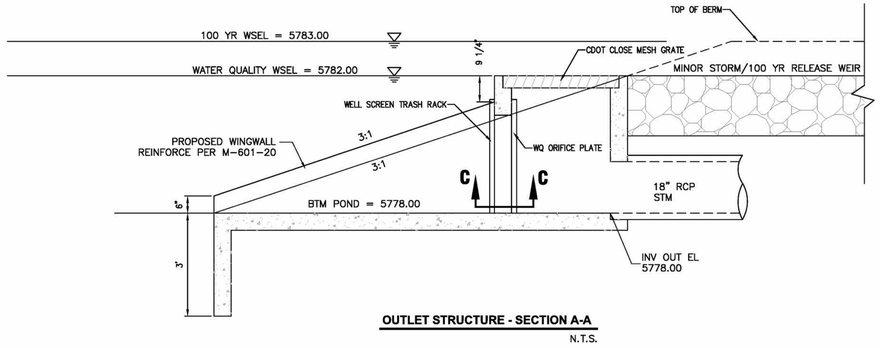
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



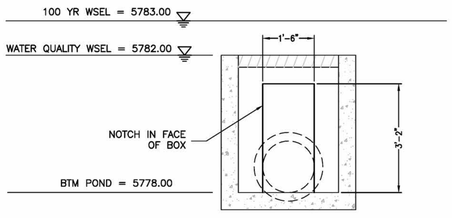
OUTLET STRUCTURE - PLAN VIEW
N.T.S.



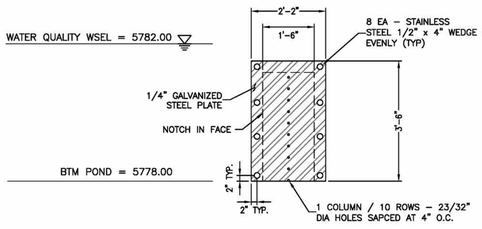
KEYMAP
N.T.S.



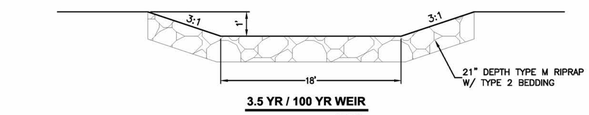
OUTLET STRUCTURE - SECTION A-A
N.T.S.



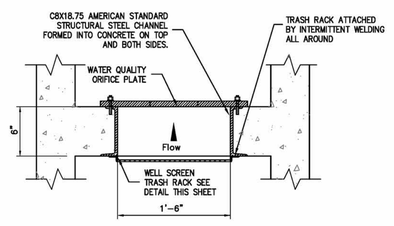
OUTLET STRUCTURE - SECTION B-B
N.T.S.

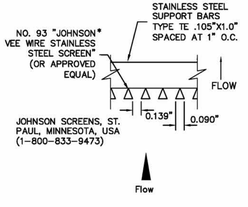


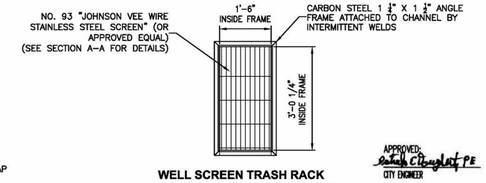
WATER QUALITY ORIFICE PLATE
N.T.S.



3.5 YR / 100 YR WEIR
N.T.S.







WELL SCREEN TRASH RACK
N.T.S.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3111

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 487-9438

LEYDEN ROCK FILING NO. 2
STORM SEWER PLAN & PROFILE
STM B2, C6 & OFFSITE WQ POND

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: 7408015
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 20'
SHEET NO: 50 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ET150-0054-F2-B2&C6 STM-081314.dwg, 6/15/2015 10:41:47 AM

~~CONSTRUCTION PLANS~~ **RECORD DRAWINGS**

LEYDEN ROCK SUBDIVISION, FILING NO. 5

BLOCK 12 OF LEYDEN ROCK SUBDIVISION FILING NO. 1
A PORTION OF SECTIONS 22, 23, 26, AND 27, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 27 BEARS N 89°44'54" W AND MONUMENTED AS FOLLOWS:

- THE WEST QUARTER CORNER OF SECTION 27 BEING A FOUND 2" BRASS CAP MARKED "PLS 11434 1999 5881.08" IN 4"X4" SQUARE CONCRETE POST 1.4" BELOW GROUND LEVEL.
- THE CENTER QUARTER CORNER OF SECTION 27 BEING A FOUND NO. 6 REBAR W/ 3.25" ALUMINUM CAP MARKED "PLS 13258 1997" 0.2' ABOVE GROUND LEVEL.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS-DREXEL GROUP ALTA/ACSM SURVEY 7-21-06

LEGAL DESCRIPTION:

BLOCK 12, LEYDEN ROCK SUBDIVISION FILING NO. 1, A SUBDIVISION RECORDED AT RECEPTION NUMBER 2012078338 AND LOCATED IN SECTIONS 22, 23, 26 AND 27, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO.

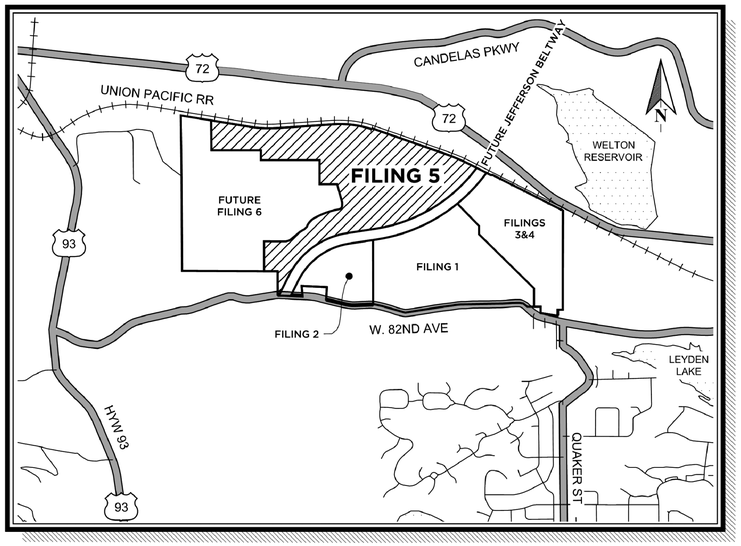
THE ABOVE DESCIBED PARCEL CONTAINS AN AREA OF 12,929,312 SQUARE FEET OR 296.816 ACRES MORE OR LESS.

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 12-23-16 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE



VICINITY MAP

1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET
02	NOTES SHEET
03	TYPICAL STREET SECTIONS 1 OF 2
04	TYPICAL STREET SECTIONS 2 OF 2
05	PUBLIC IMPROVEMENT QUANTITIES
06	OVERALL UTILITY PLAN
07	PHASING PLAN
	OVERLOT GRADING
08	OVERALL GRADING PLAN
09	LOT GRADING - SHEET 1
10	LOT GRADING - SHEET 2
11	LOT GRADING - SHEET 3
12	TYPICAL OVERLOT TEMPLATES
	SIGNAGE & STRIPING
13	ONSITE - SHEET 1
14	ONSITE - SHEET 2
15	ONSITE - DETAILS
16	LEYDEN ROAD
	ROAD PLAN & PROFILES
17	LEYDEN ROAD
18	LEYDEN ROAD MEDIANS
19	WEST 87TH DRIVE
20	WEST 87TH DR & LEYDEN ROCK DR
21	LEYDEN ROCK DRIVE - SHEET 1
22	LEYDEN ROCK DRIVE - SHEET 2
23	LEYDEN ROCK DIRVE - SHEET 3
24	CULEBRA STREET - SHEET 1
25	CULEBRA STREET - SHEET 2
26	WEST 85TH DRIVE - SHEET 1
27	WEST 85TH DRIVE - SHEET 2
28	WEST 85TH DRIVE - SHEET 3
29	YUCCA STREET
30	ZIRCON WAY - SHEET 1
31	ZIRCON WAY - SHEET 2
32	ZIRCON WAY - SHEET 3
33	WEST 86TH AVENUE
34	YULE STREET
35	WEST 87TH AVENUE - SHEET 1
36	WEST 87TH AVENUE - SHEET 2
37	WINDY STREET
38	WEST 87TH AVENUE
39	WILKERSON STREET
40	WEST 84TH AVENUE
41	WEST 84TH DRIVE
42	WEST 84TH PLACE
43	BLANCA COURT
	WATER PLANS
44	WATER PLANS - SHEET 1
45	WATER PLANS - SHEET 2
46	WATER PLANS - SHEET 3
47	WATER PLANS - SHEET 4
48	WATER PROFILE REFERENCE SHEET
49	WATER PROFILES 1, 3, AND 4
50	WATER PROFILES 2
51	WATER PROFILE 5
52	WATER PROFILES 6
53	WATER PROFILES 7
54	WATER PROFILES 8, 9, AND 10
	SANITARY PLAN & PROFILES
55	LEYDEN ROAD
56	CULEBRA STREET - SHEET 1
57	CULEBRA STREET - SHEET 2
58	WEST 85TH DRIVE - SHEET 1
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60	WEST 85TH DRIVE - SHEET 3
61	YUCCA STREET
62	WEST 87TH DRIVE
63	ZIRCON WAY - SHEET 1
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65	WEST 84TH AVENUE
66	WEST 84TH DRIVE
67	BLANCA COURT
68	WEST 84TH PLACE
69	LEYDEN ROCK DRIVE
70	TRACT B - SHEET 1
71	TRACT B - SHEET 2
72	WEST 87TH AVENUE - SHEET 1
73	WEST 87TH AVENUE - SHEET 2
74	WILKERSON STREET
75	WEST 86TH LANE
76	WEST 86TH AVENUE
77	YULE STREET
78	WINDY STREET
	STORM PLAN & PROFILES
79	STORM 1, 4, AND 5
80	STORM 2 (STA 0+00 - STA 7+60)
81	STORM 2 (STA 7+60 - STA 13+19)
82	STORM 3 (STA 0+00 - STA 8+80)
83	STORM 3 (STA 8+80 - STA 14+28)
84	STORM 6, 9, AND 10
85	STORM 7
86	STORM 8 (STA 0+00 - STA 8+50)
87	STORM 8 (STA 8+50 - STA 11+00)
88	STORM 11 (STA 0+00 - STA 7+50)
89	STORM 11 (STA 7+50 - STA 14+90)
90	STORM 12, 13, AND 14
91	STORM 16 (STA 0+00 - STA 6+60)
92	STORM 16 (STA 6+60 - STA 13+38)
93	STORM 15 & 17 AMENDED SHEET
94	STORM 18, 19 and 20
95	STORM 21, 22, 23, AND 24
96	AREA DRAIN 1
97	AREA DRAIN 2
	BARBARA GULCH
98	PLAN & PROFILE (BARBARA GULCH IMPROVEMENTS NOT COMPLETED AS OF 12.23.2016)
	STORM DETAILS
99	POND B OUTLET STRUCTURE
100	POND F OUTLET STRUCTURE
101	POND G OUTLET STRUCTURE
102	STM 2 POND OUTLET HEADWALL DETAIL

REFERENCE SHEETS

103	PARKWAY DRAIN EXTENSION
104	PARKWAY GRADING ASBUILTS
105	SUBEX DRAINS 1 OF 2
106	SUBEX DRAINS 2 OF 2

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A-100
CENTENNIAL, CO 80112
PHONE: 303-770-9111

ENGINEER
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: KEN TOLAND, PE

FIRE PROTECTION
ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TIM HOOS, PE

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT-OF-WAY
	PROPOSED SETBACK
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
SS STA: 1+00.00	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED UNDERDRAIN
100 LF 18" RCP	PROPOSED STORM SEWER LINE
	PROPOSED TYPE R INLET
	PROPOSED TYPE 16 INLET
	PROPOSED BOX BASE MANHOLE
	PROPOSED CIRCULAR MANHOLE
	PROPOSED FLARED END SECTION
	PROPOSED RIPRAP
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED IRRIGATION SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW-OFF
	PROPOSED BEND W/ THRUST BLOCK
	PROPOSED CROSS
	PROPOSED TEE
	PROPOSED AIR RELEASE VALVE
	PROPOSED PRESSURE REDUCING VALVE
	PROPOSED 100 YR WATER SURFACE ELEVATION
	PROPOSED FLOWLINE SWALE

APPROVED: Patrick E. Douglass PE — CITY ENGINEER — 12-12-13 DATE — 3385 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
4.			
5.			
6.			
7.			
8.			

STAMP: COLORADO REGISTERED KENNETH PAUL TOLAND 12-3-15 33801 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROCK - FILING 5
COVER SHEET

PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = NA'
SUBMITTED ON: 07/22/2013

01 OF 102

J:\2013\LEYDEN ROCK\LEYDEN-FIL-FDP\CIVIL\CONSTRUCTION\LEYDEN-FIL-5-CVR.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER — 12-23-16 — 33801

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE

MAJOR COLLECTOR

LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES

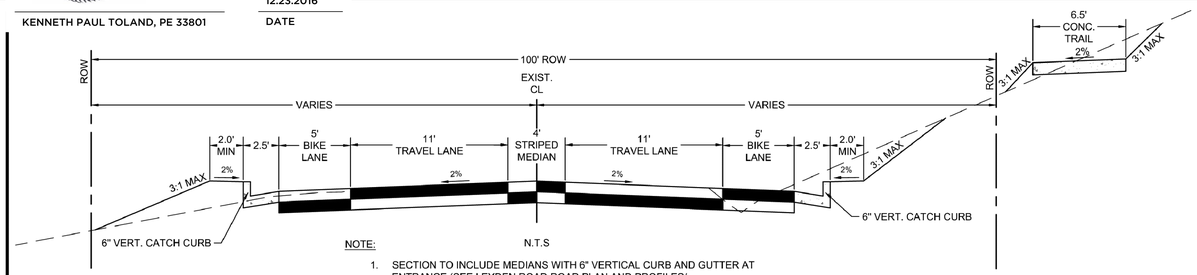
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
NA	25' / 0.4' MIN FALL	NA

K VALUES

45 MPH DESIGN	MINIMUM
CREST	80
SAG	70



NOTE:

1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT ENTRANCE (SEE LEYDEN ROAD ROAD PLAN AND PROFILES/

MINOR COLLECTOR (WITH PARKING)

ROADS:

W. 85TH DRIVE
YUCCA STREET

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.06 %

MAX GRADE AT INTERSECTION APPROACHES

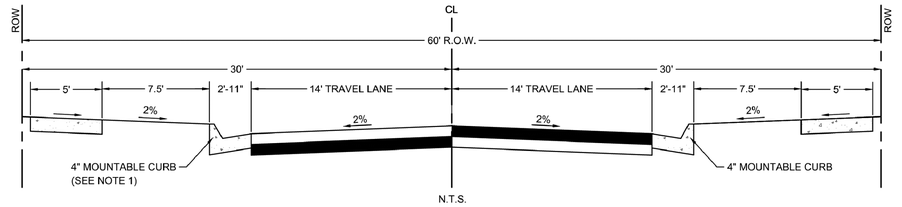
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



NOTE: 1. THE NORTHERN CURB LINES BECOMES 6" VERTICAL CURB AS IT BORDERS BLOCK 20, TRACT S AND BLOCK 16.

MINOR COLLECTOR (NO PARKING)

ROADS:

CULEBRA STREET (FROM W. 84TH AVE TO W. 85TH DRIVE)

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES

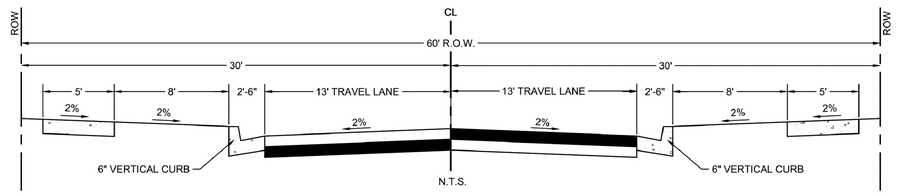
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MINOR COLLECTOR (NO PARKING)

ROADS:

CULEBRA STREET (FROM LEYDEN RD TO W. 84TH AVE.)

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES

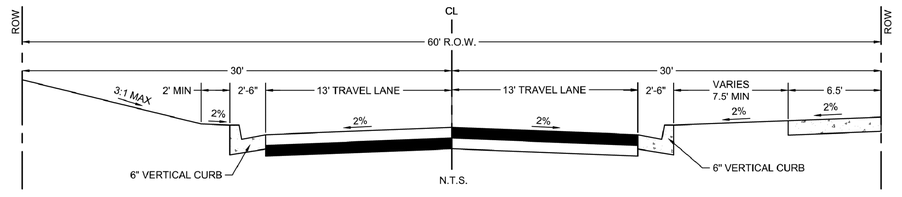
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



NOTE:

1. FROM LEYDEN ROAD TO W. 84TH AVE, CULEBRA STREET SHALL HAVE A 6.5' WALK ON THE EAST SIDE OF THE STREET ONLY. NO WALK TO BE CONSTRUCTED ON THE WEST SIDE OF CULEBRA STREET FROM THE INTERSECTION OF LEYDEN ROAD TO W. 84TH AVE.
2. ADJACENT TO LOT 107, BLOCK 1 THE TREELAWN IS 7.5' WIDE.

APPROVED:
CITY ENGINEER — DATE 12-12-13 — JOB NUMBER 3385

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KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
4			
5			
6.			
7.			
8.			

STAMP: COLORADO REGISTERED PROFESSIONAL ENGINEER — 12-3-15 — 33801

SHEET INFO:

LEYDEN ROCK - FILING 5

TYPICAL STREET SECTIONS 1 OF 2

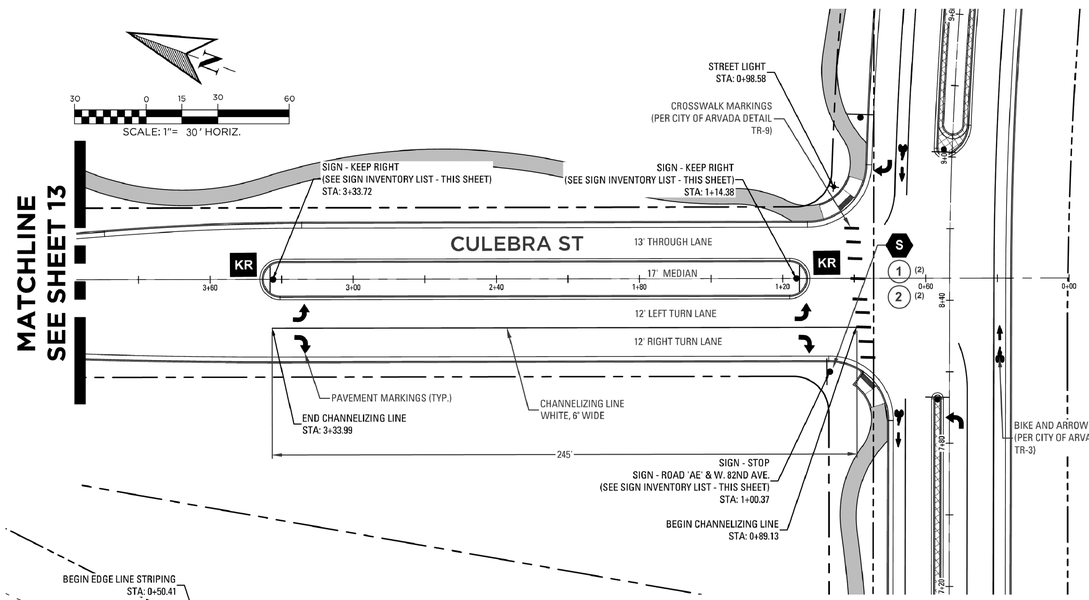
PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = NA'
SUBMITTED ON: 07/22/2013

03 OF 102

J:\2013\LEYDEN ROCK\LEYDEN-F5-FDP\CIVIL\CONSTRUCTION\LEYDEN-F5-TYP-SECT-STREET.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SIGN INVENTORY LIST - LEYDEN ROAD				
ITEM #	QUANTITY OF SIGNS	SIGN DESCRIPTION	CODE #	SIZE
1	2	W. 82ND AVENUE	A-S1-1	-
2	2	CULEBRA STREET	A-S1-1	-
S	1	STOP SIGN	R1-1	30" OCT.
R	2	RIGHT LANE MUST TURN RIGHT	R3-7R	30" x 30"
KR	6	KEEP RIGHT	R4-7	24" x 30"
BL	2	BIKE LANE	R3-17	24" X 18"
END	1	ENDS PLAQUE	R3-17bP	24" X 8"
AH	1	AHEAD PLAQUE	R3-17aP	24" X 8"
200	1	200' PLAQUE	W16-2aP	24" X 12"



R1-1
STOP
30"x30"
BACKGROUND:4090 (3M-White Diamond Grade) or equivalent
FOREGROUND: 1172 (3M-Red EC Film) or equivalent

R3-7R
RIGHT LANE MUST TURN RIGHT
(SYMBOL SIGN)
(Arvada Standard)
30"X30"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R4-7
KEEP RIGHT
(SYMBOL SIGN)
(Arvada Standard)
24"X30"
BACKGROUND: 3930 HIP (3M-White) or equivalent
FOREGROUND: 1178C (3M-Black EC Film) or equivalent

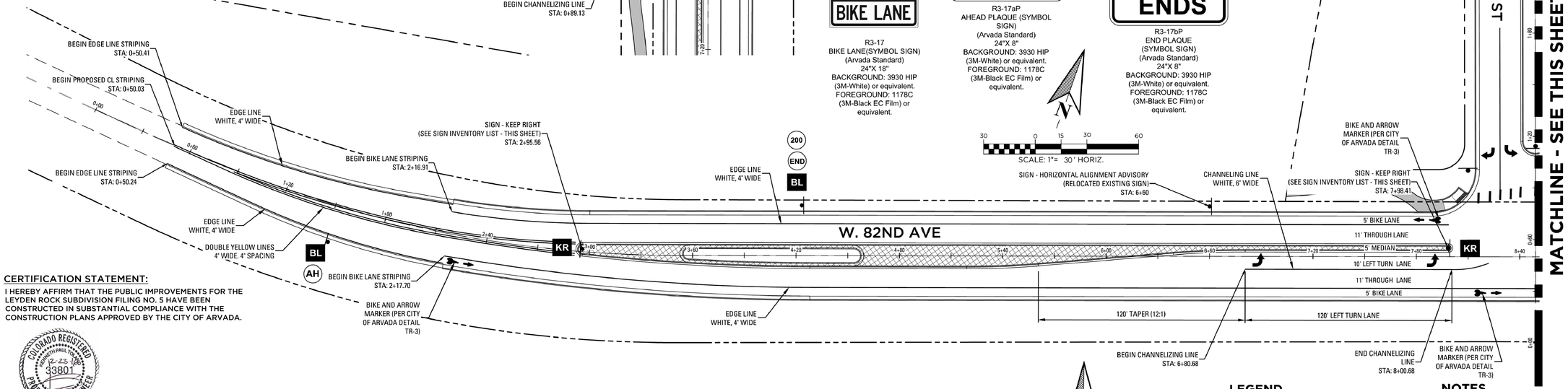
A-S1-1
STREET NAME SIGN
(POST MOUNTED)
36"x9"
(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)
BACKGROUND: 4090 (3M-White Diamond Grade) or equivalent
FOREGROUND: 1175C (3M-Blue EC Film) or equivalent
(FOR CITY OF ARVADA LOGO SPECS REFER TO CITY DETAIL TR-14)

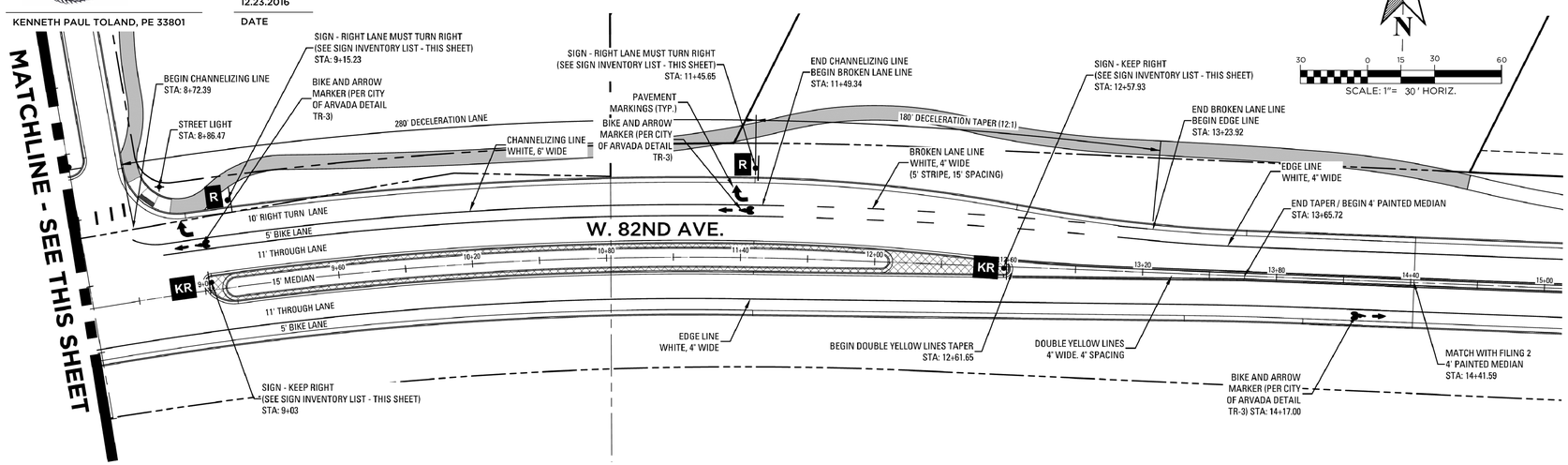
R3-17
BIKE LANE(SYMBOL SIGN)
(Arvada Standard)
24"X 18"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R3-17aP
AHEAD PLAQUE (SYMBOL SIGN)
(Arvada Standard)
24"X 8"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R3-17bP
END PLAQUE
(SYMBOL SIGN)
(Arvada Standard)
24"X 8"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

W16-2aP
200' PLAQUE (SYMBOL SIGN)
(Arvada Standard)
24"X12"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.



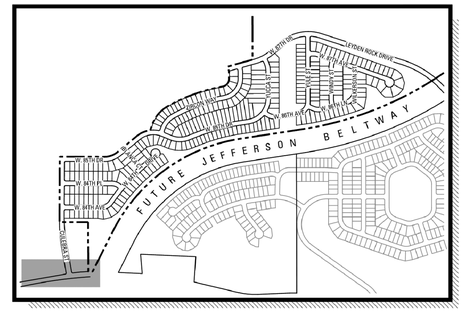


LEGEND

- S = PROPOSED STOP SIGN
- KR = PROPOSED KEEP RIGHT SIGN
- R = PROPOSED RIGHT LANE MUST TURN RIGHT SIGN
- BL = PROPOSED BIKE LANE SIGN
- AH = PROPOSED AHEAD PLAQUE
- END = PROPOSED ENDS PLAQUE
- 200 = PROPOSED "200 FT" PLAQUE
- 14 = SINGLE SIGN
- 14 (2) = TWO IDENTICAL SIGNS MOUNTED BACK TO BACK
- = SIGN POST LOCATION (MULTIPLE SIGN SYMBOLS ADJACENT TO SIGH POST SYMBOL INDICATE MULTIPLE SIGNS MOUNTED TO A SINGLE POST.)

NOTES

1. ALL SIGNAGE TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
2. ALL SIGNS MOUNTED PER ARVADA STANDARD DETAIL TR-1 "SPECIFICATION FOR SIGN SUPPORT MATERIAL AND INSTALLATION."
3. ALL STREET SIGNS TO BE PER ARVADA STANDARD DETAIL TR-11 "STREET NAME SIGN (POST MOUNTED)".
4. SEE ADDRESS PLAT FOR BLOCK AND ADDRESS INFORMATION.
5. ALL STREET NAME SIGNS SHALL BE SENT TO THE CITY OF ARVADA PRIOR TO FABRICATION.
6. THE POSTED SPEED LIMIT FOR LEYDEN ROAD IS 40MPH.
7. ALL CROSSWALKS/LANE CONTROLLED ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-ES TAPE, INLAID WITH OVERLAY.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER ARVADA STANDARD TR-2 AND TR-5.
9. A BIKE LANE AND ARROW PAVEMENT SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA STANDARD TR-3.



KEYMAP
NTS

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-23-15
33801

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

APPROVED:
CITY ENGINEER — DATE: 12-12-13 — JOB NUMBER: 3385

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
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3.	FOR CONSTRUCTION	12/03/2013	EST
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7.			
8.			

STAMP:
COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-3-15
33801

SHEET INFO:

LEYDEN ROCK - FILING 5

SIGNAGE & STRIPING & STREET LIGHTS W. 82ND AVE

PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = 30'
SUBMITTED ON: 07/22/2013

16 OF 102

J:\2008\LEYDEN ROCK\LEYDEN-F5-FDP\CIVIL\CONSTRUCTION\LEYDEN-F5-RD-LEYDEN-SSST.dwg

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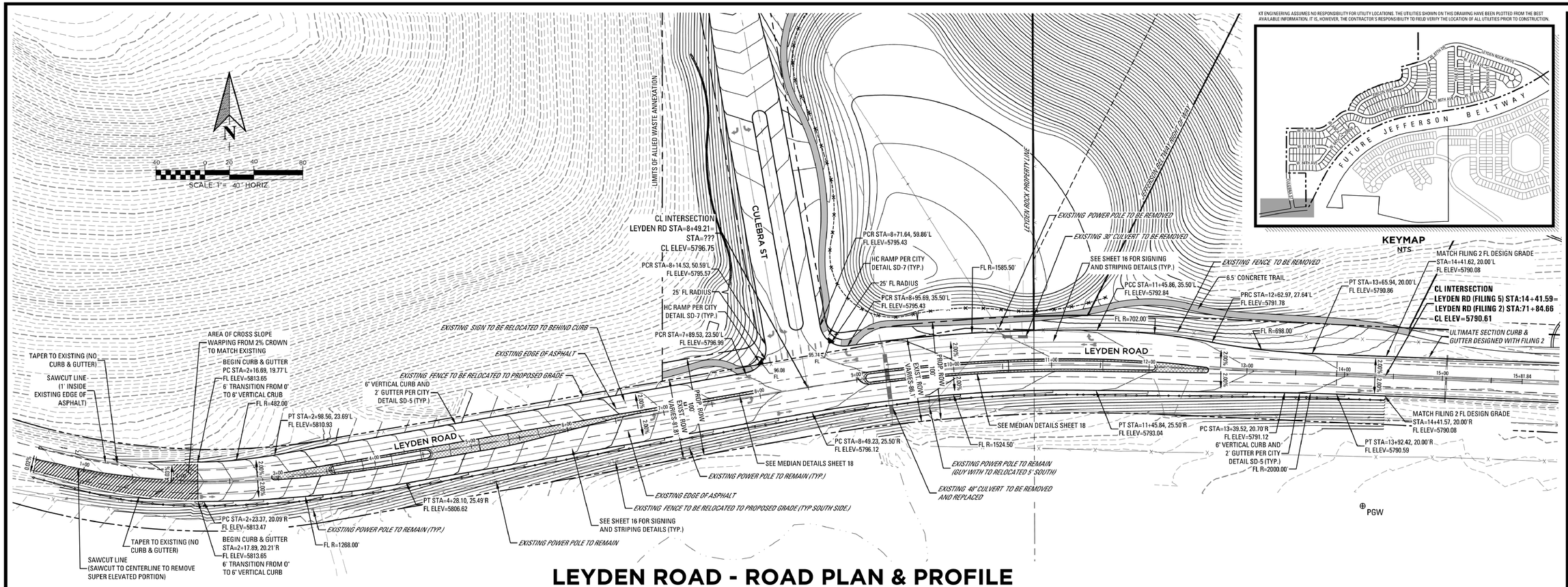
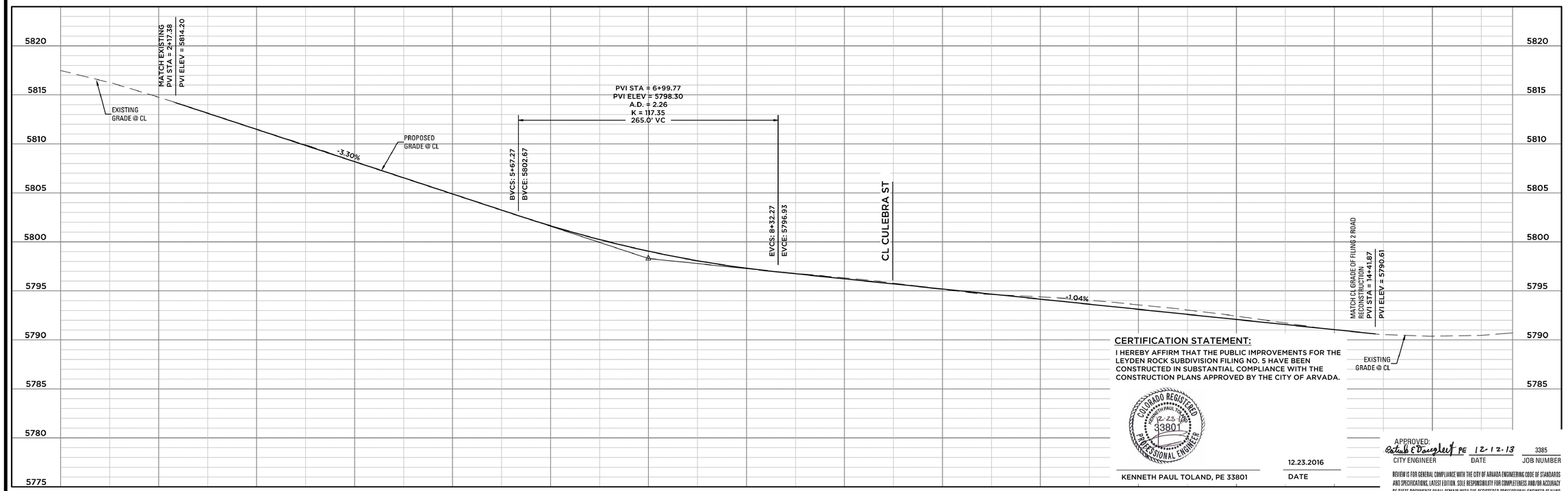


KEYMAP
NTS

LEYDEN ROAD - ROAD PLAN & PROFILE



CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 12-23-16 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

APPROVED:
Richard E Dougherty PE 12-12-13 3385
CITY ENGINEER DATE JOB NUMBER

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J:\3038\LEYDEN ROCK\LEYDEN-FS-RDPLOVIL\CONSTRUCTION\LEYDEN-FS-RD-LEYDEN.dwg

KT

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12500 W. 58TH AVE. #230
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P: 720.638.5190
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PREPARED FOR:
RRCEA, LLC

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6			
7			
8			

STAMP:

COLORADO REGISTERED KENNETH PAUL TOLAND 12-3-15 33801 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROCK - FILING 5

ROAD PLAN & PROFILES
LEYDEN ROAD

PROJECT NO:
003-13-05

DRAWN BY:
BSS

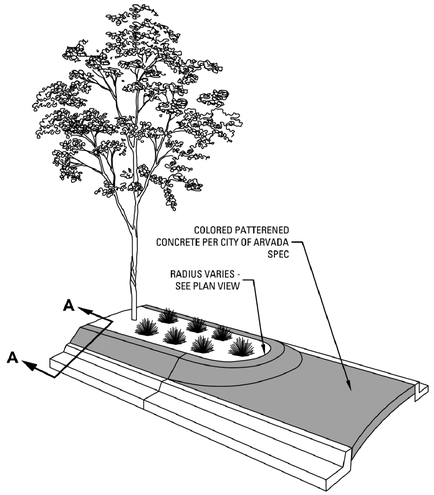
DESIGNED BY:
BSS

SCALE:
1" = 50'

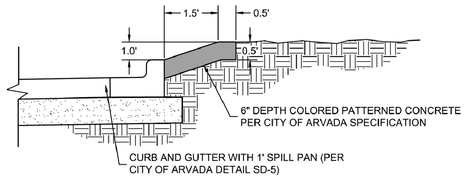
SUBMITTED ON:
07/22/2013

17
OF 102

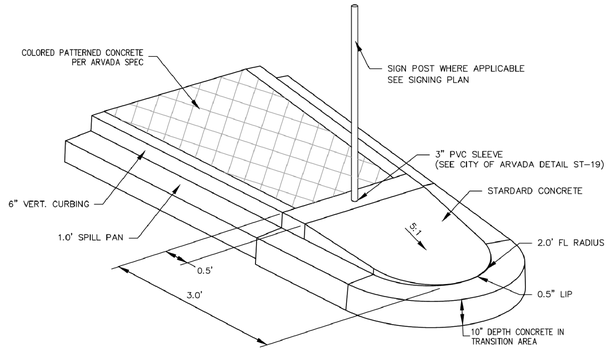
KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



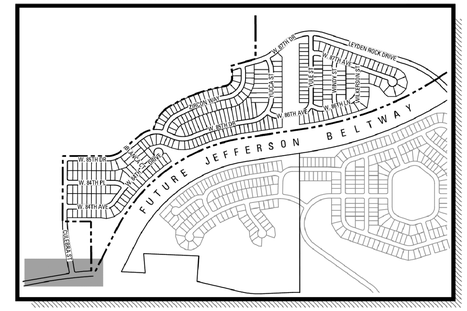
RAISED MEDIAN DETAIL
NTS



SECTION A-A
NTS



PLOWABLE CURB DETAIL
NTS


FUTURE JEFFERSON BELTWAY
LEYDEN ROCK DRIVE
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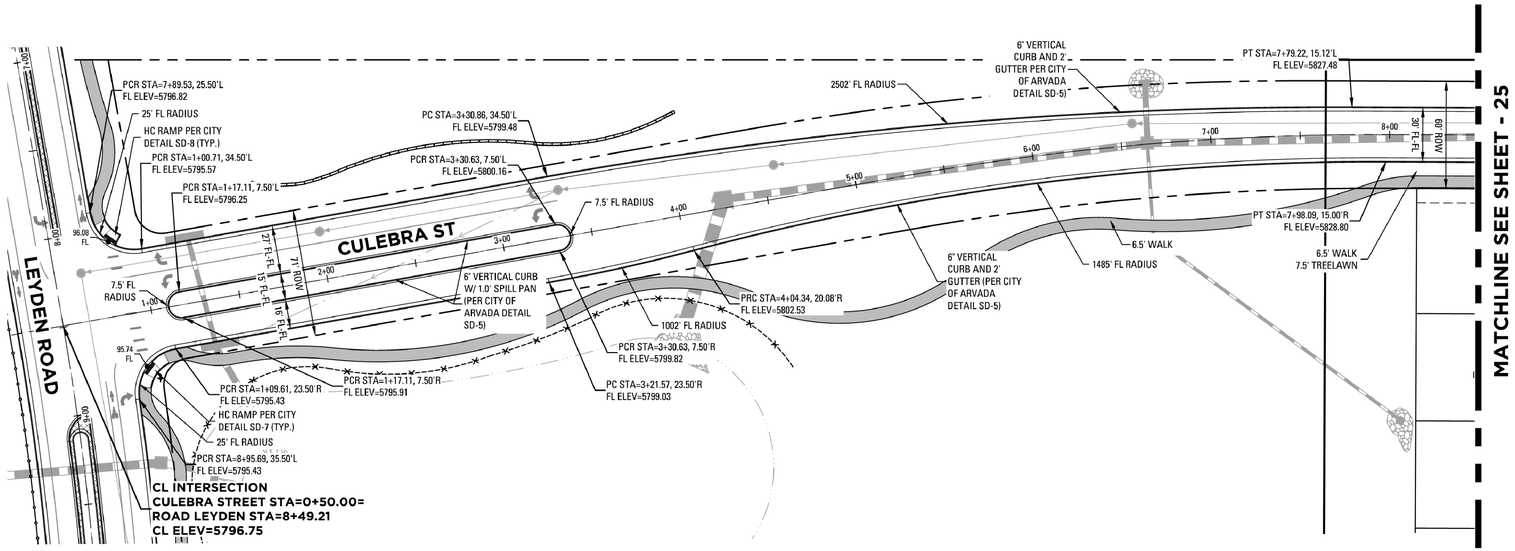
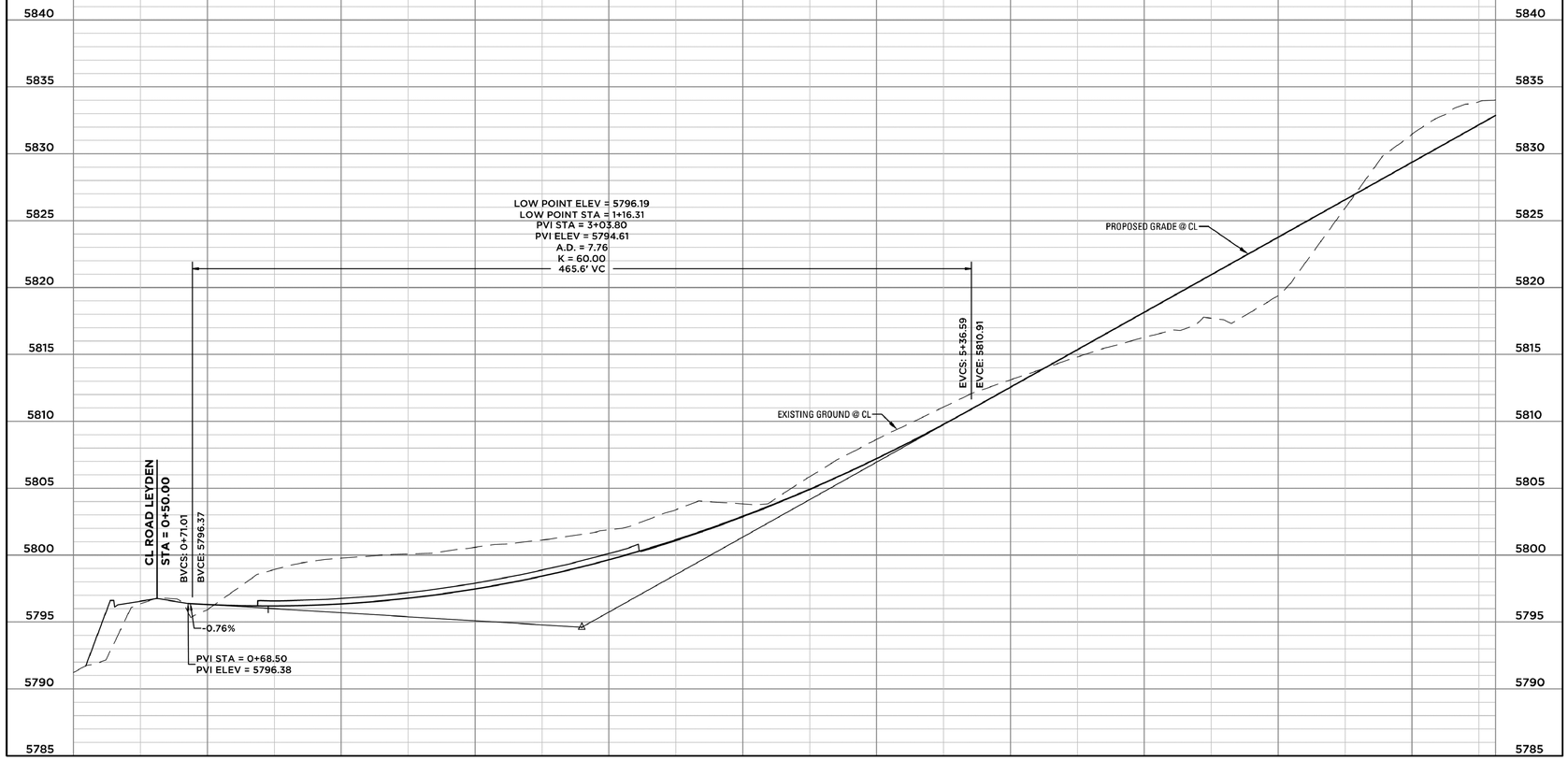
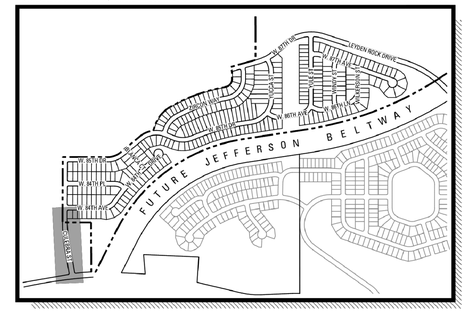


CULEBRA ST - ROAD PLAN & PROFILE



KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.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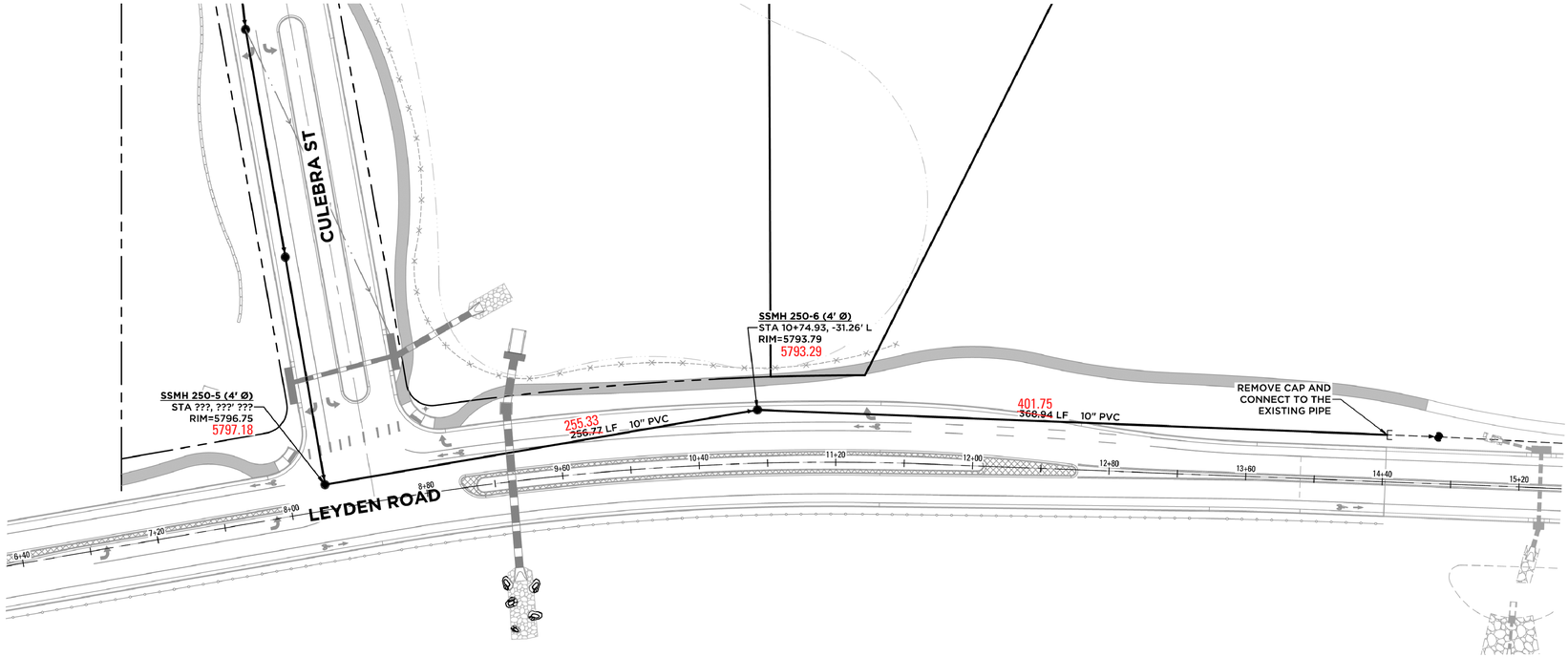
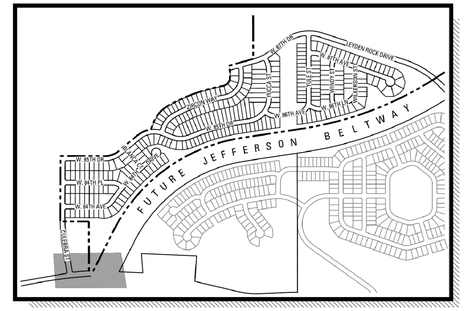
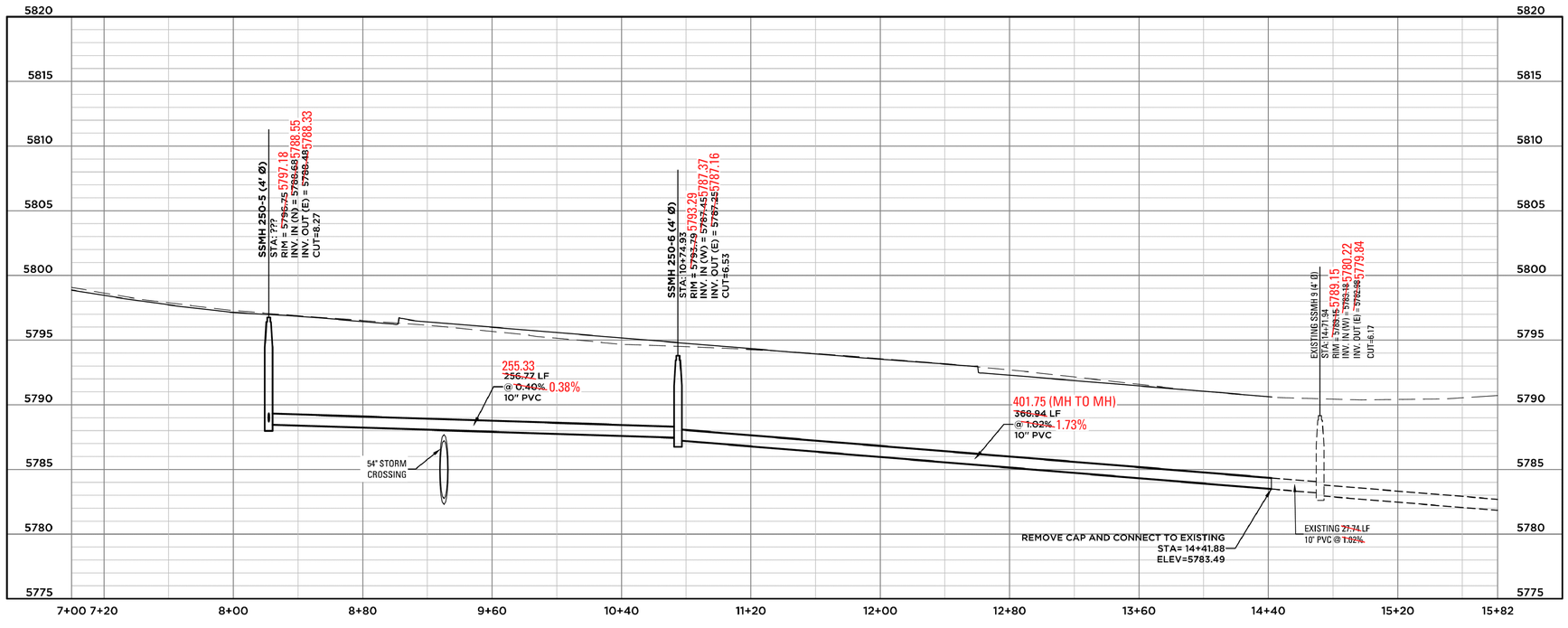
KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.





KEYMAP
NTS

LEYDEN ROAD- SANITARY PLAN & PROFILE



CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-23-16
33801

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 12' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.

APPROVED:
Kathleen Daugherty PE 12-12-13 3385
CITY ENGINEER — DATE — JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	11/15/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
4.			
5.			
6.			
7.			
8.			

STAMP:
COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-3-15
33801

SHEET INFO:

LEYDEN ROCK - FILING 5

SANITARY PLAN & PROFILE
LEYDEN ROAD

PROJECT NO:
003-13-05

DRAWN BY:
EST

DESIGNED BY:
KPT

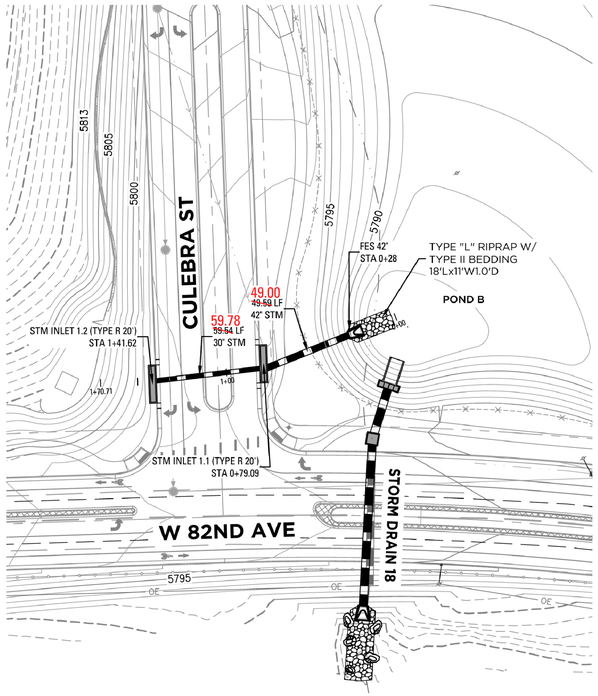
SCALE:
1" = 40'

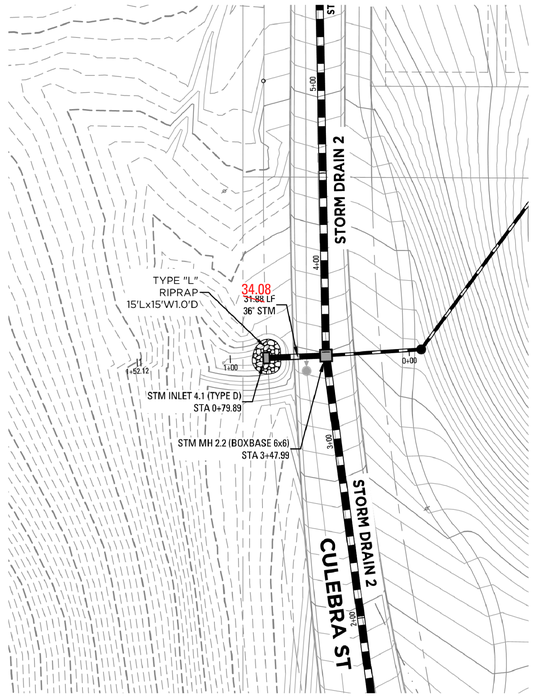
SUBMITTED ON:
07/22/2013

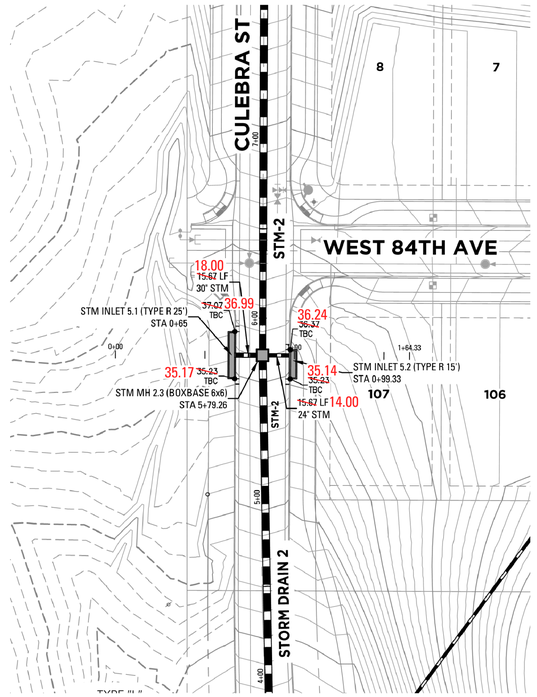
55 OF 102

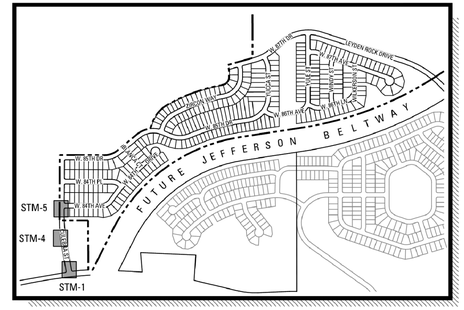
J:\JOBS\LEYDEN ROCK\LEYDEN-FS-FD\CIVIL\CONSTRUCTION\LEYDEN-FS-SAN-LEYDEN.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



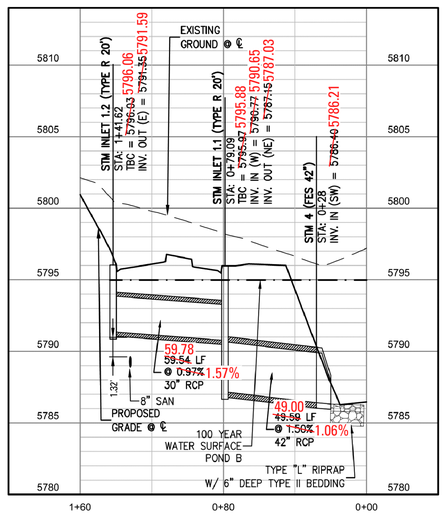




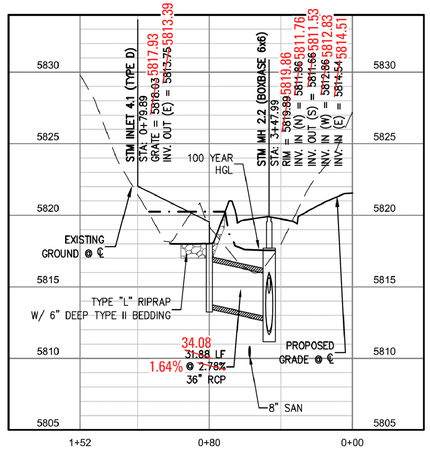


KEYMAP
NTS

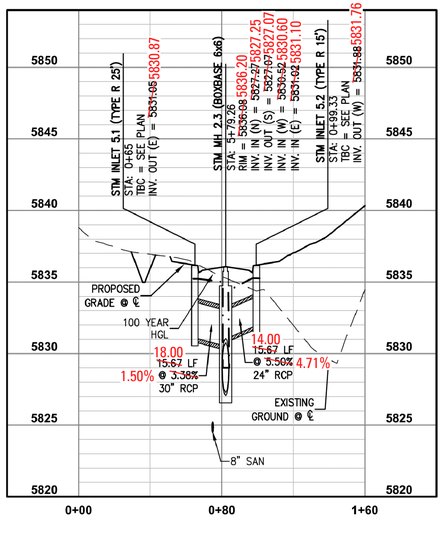
STORM DRAIN LINE 1 PLAN AND PROFILE



STORM DRAIN LINE 4 PLAN AND PROFILE



STORM DRAIN LINE 5 PLAN AND PROFILE



CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-23-16 33801

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

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APPROVED:
CITY ENGINEER — DATE 12-12-13 — 3385 JOB NUMBER

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KT ENGINEERING
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PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
4			
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STAMP:

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-3-15 33801

SHEET INFO:

LEYDEN ROCK - FILING 5

STORM PLAN & PROFILES
STORM 1, 4, AND 5

PROJECT NO:
003-13-05

DRAWN BY:
EST

DESIGNED BY:
KPT

SCALE:
1" = 40'

SUBMITTED ON:
07/22/2013

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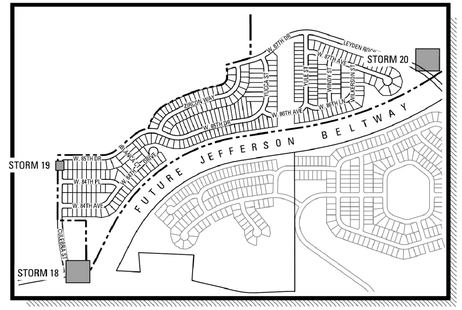

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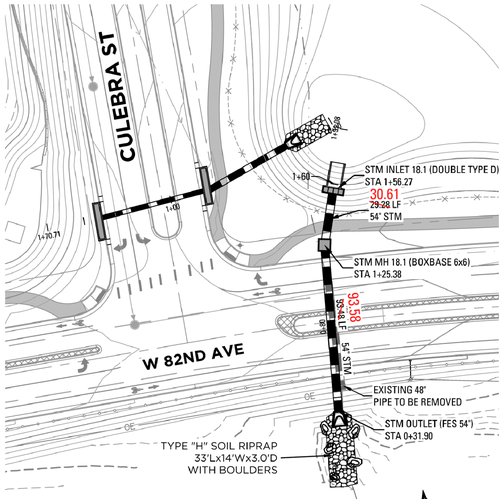
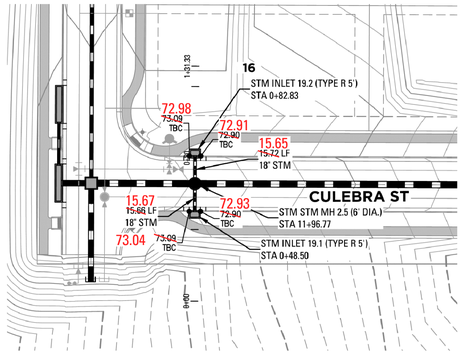


STORM 18
PLAN AND PROFILE



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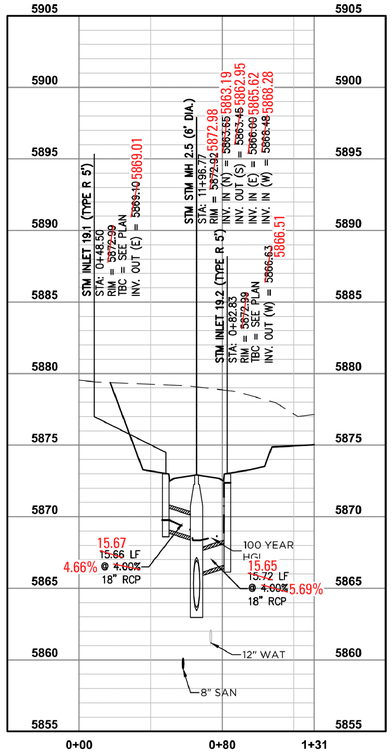
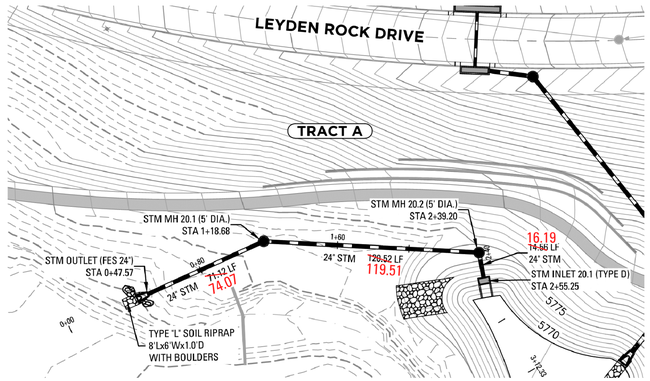
PLAN AND PROFILE





STORM 20
PLAN AND PROFILE

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COLORADO REGISTERED PROFESSIONAL ENGINEER 12-23-16 33801

KENNETH PAUL TOLAND, PE 33801

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SHEET INFO:

LEYDEN ROCK - FILING 5

STORM PLAN & PROFILES STORM 18, 19 AND 20

PROJECT NO:
003-13-05

DRAWN BY:
KPT

DESIGNED BY:
KPT

SCALE:
1" = 40'

SUBMITTED ON:
07/22/2013

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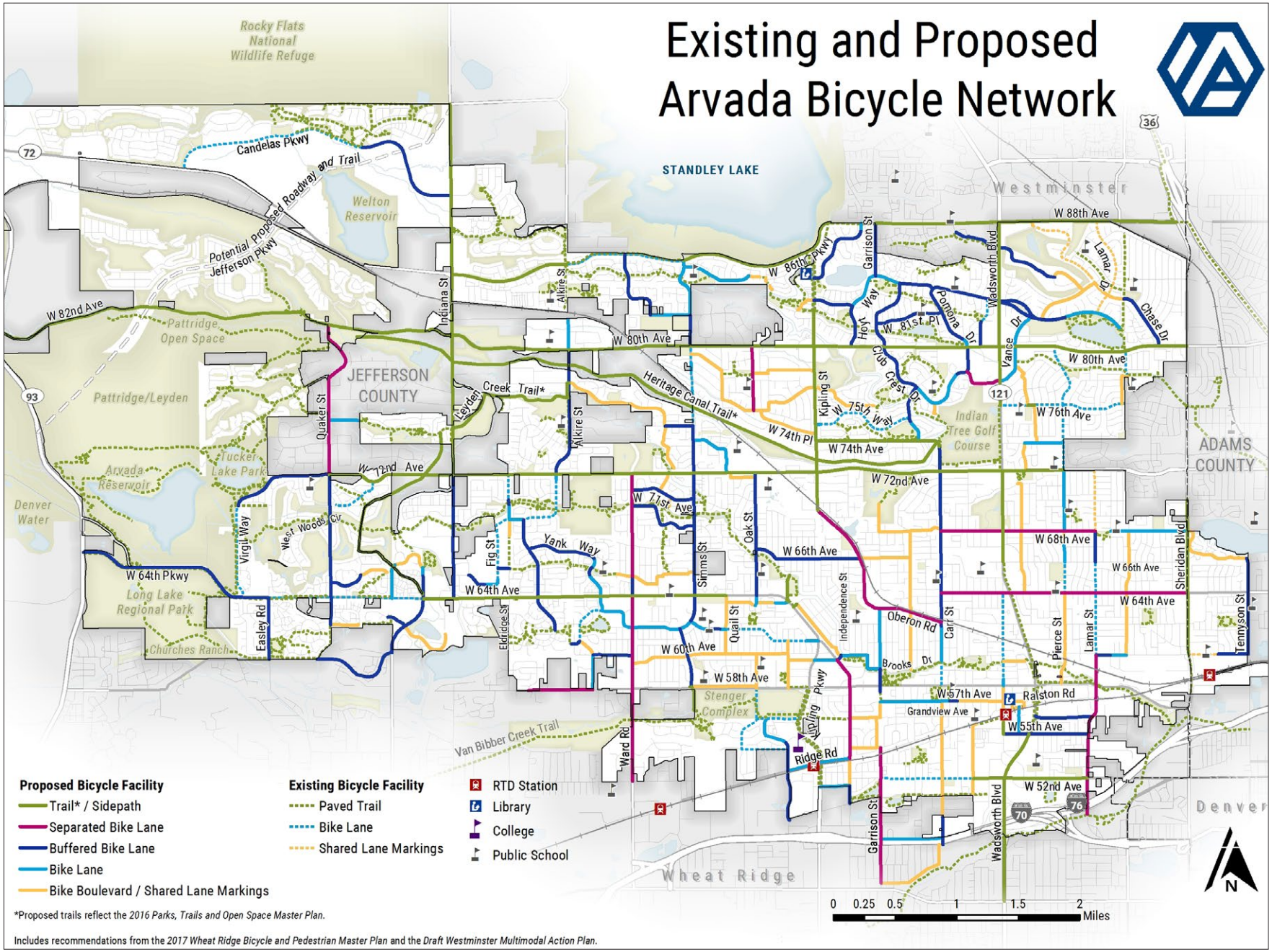
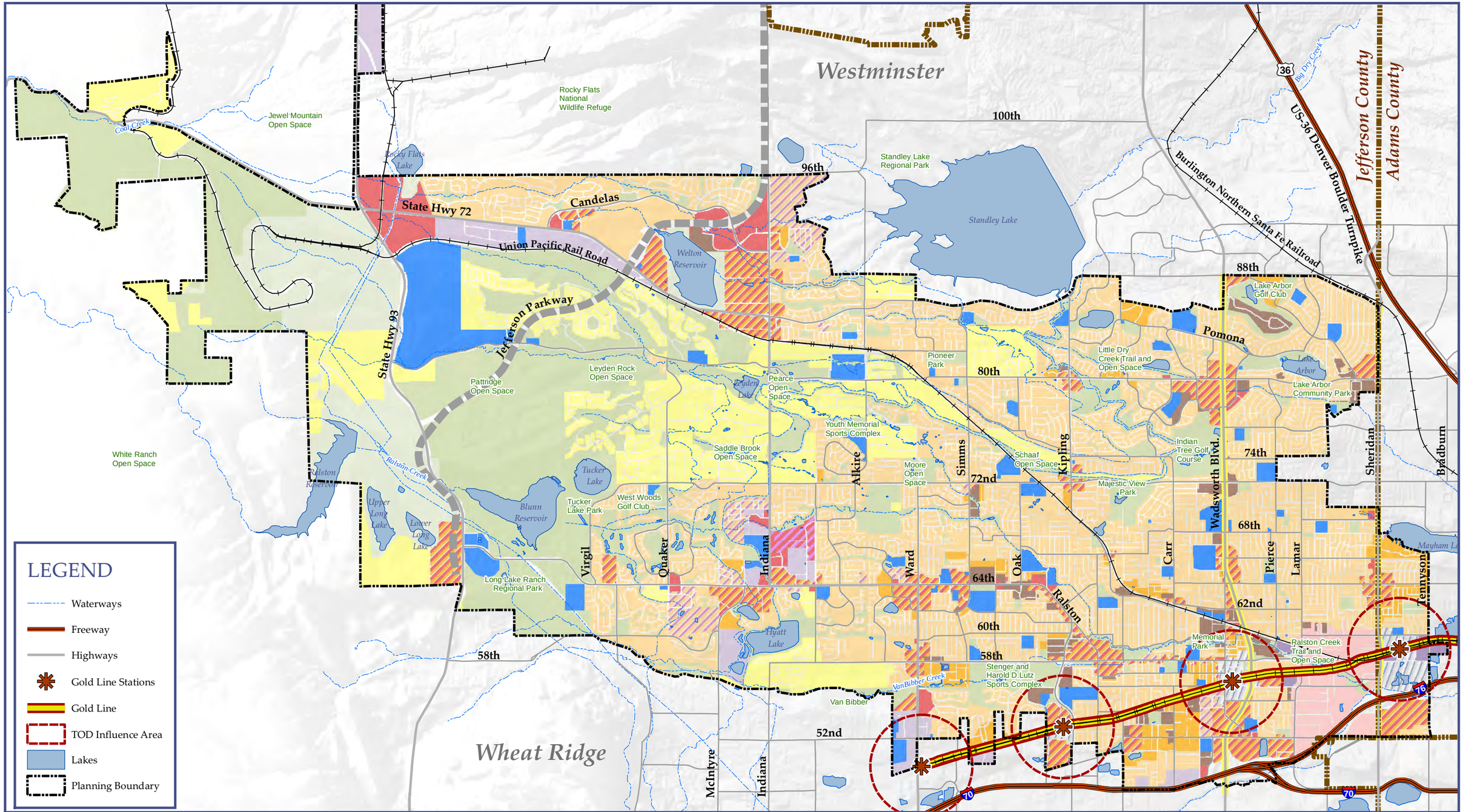


Figure 6: Proposed Arvada Bicycle Network



LEGEND

- Waterways
- Freeway
- Highways
- Gold Line Stations
- Gold Line
- TOD Influence Area
- Lakes
- Planning Boundary

- Transit Station Framework Plan
- Clear Creek / I-76 Community Plan
- Low Density Residential
- Suburban Residential
- Medium Density Residential
- High Density Residential
- Mixed-Use: Residential Emphasis
- Mixed-Use
- Neighborhood/Community Commercial
- Industrial
- Industrial/ Office
- Open Space and Parks
- Public Land (Not Open Space and Parks)
- Public/Quasi-Public Facilities
- Office, Industrial, Retail

FUTURE LAND USE

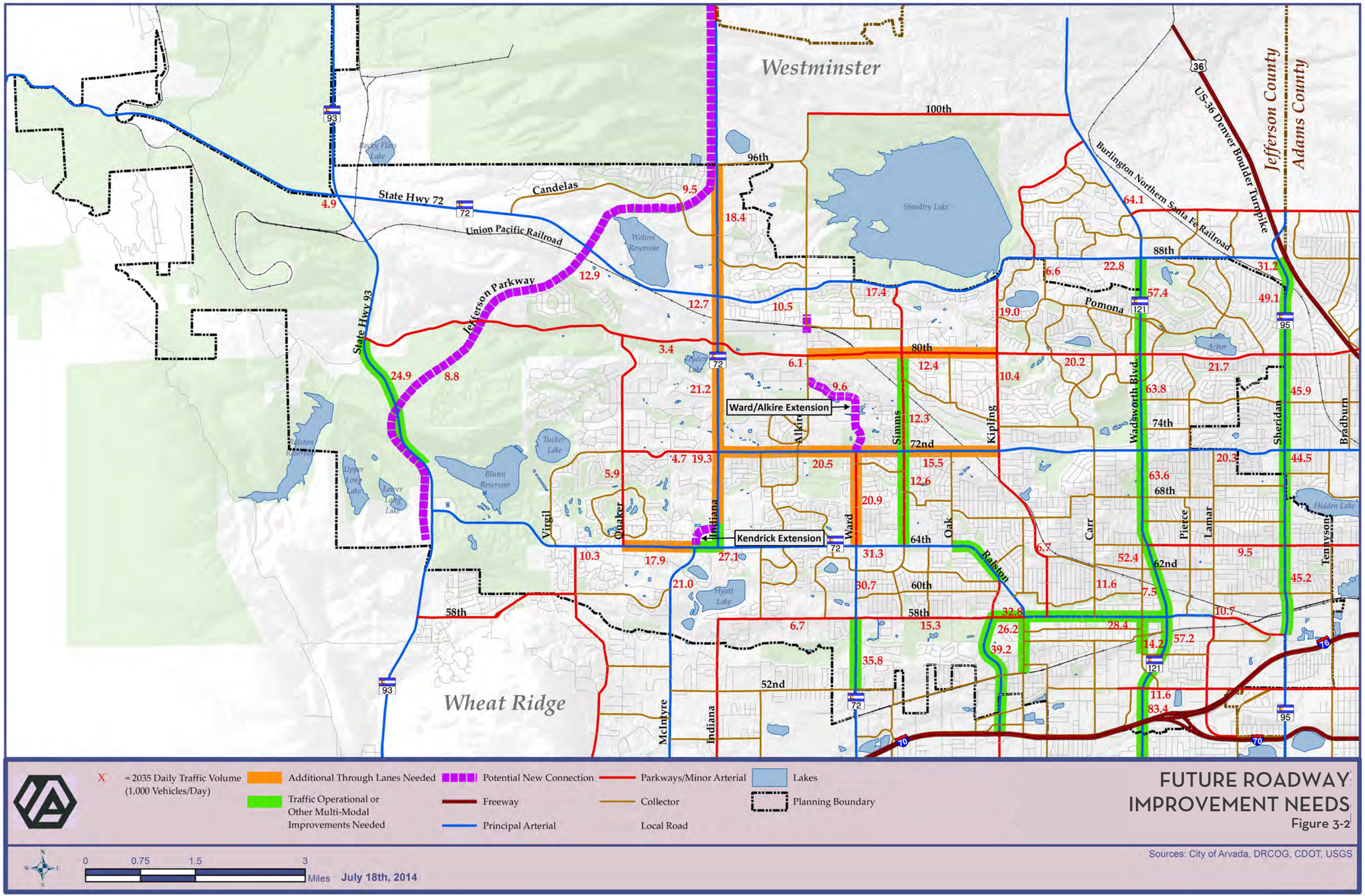
Figure 2-8

0 0.75 1.5 3 Miles

Adopted: August 19th, 2014
Revised: July 20th, 2021

A dynamic Future Land Use Map can be viewed at GIS-ARVADA.OPENDATA.ARCGIS.COM

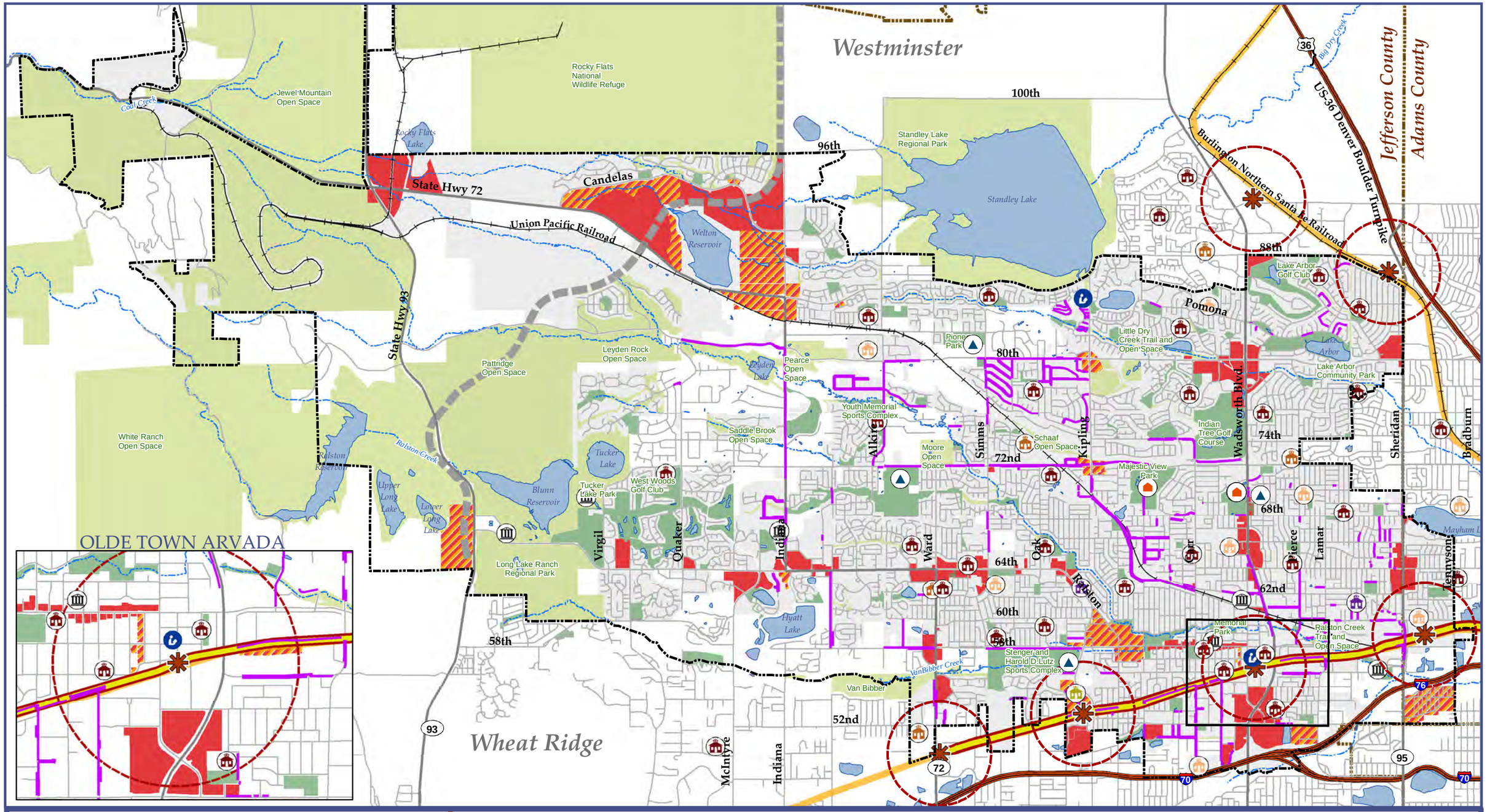
Sources: City of Arvada, DRCOG, CDOT, USGS
Land Use descriptions can be found in Chapter 2 of the Arvada Comprehensive Plan



FUTURE ROADWAY IMPROVEMENT NEEDS

Figure 3-2

Sources: City of Arvada, DRCOG, CDOT, USGS



Preschool
Elementary
Middle
High
College
Library
Cultural Facility
Apex Center
Future Commuter Rail Station Areas
Future Commuter Rail
Missing Sidewalk Gaps
Mixed-Use
Neighborhood and Community Commercial
Planning Boundary

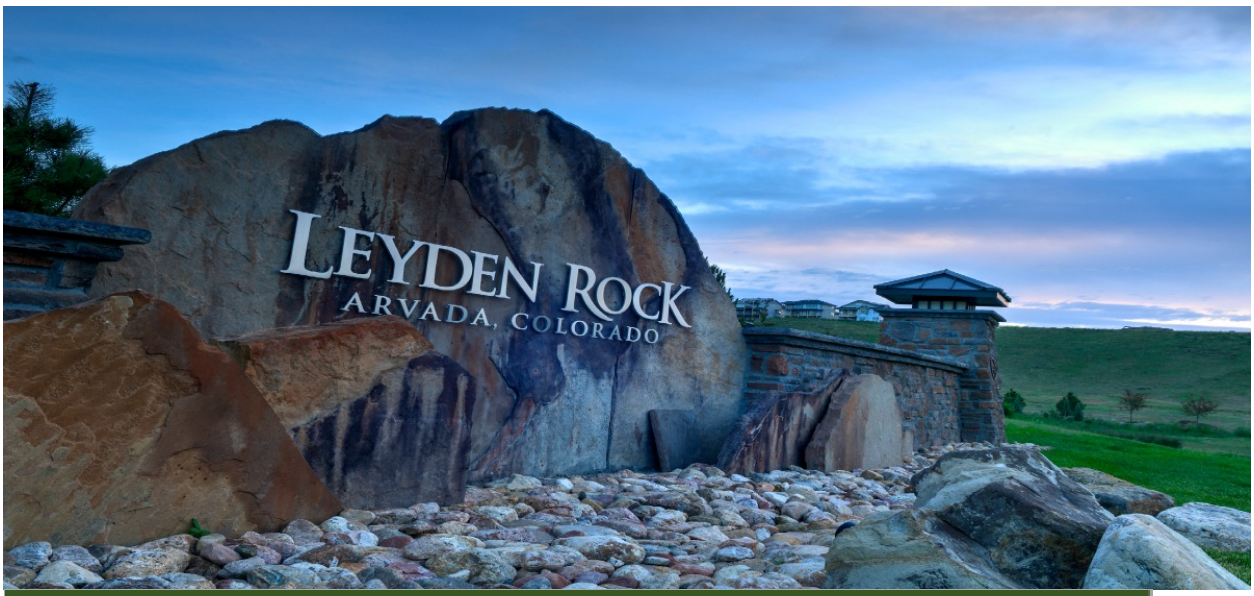
ACTIVITY CENTERS AND SIDEWALK GAPS

Figure 3-6

0 0.75 1.5 3 Miles

July 18th, 2014

Sources: City of Arvada, DRCOG, CDOT, USGS
Land Use descriptions can be found in
Chapter 2 of the Arvada Comprehensive Plan



City of Arvada

Leyden Rock Metropolitan District

Emergency Preparedness Study – Final Report

March 2024

Stantec

EXECUTIVE SUMMARY

The Leyden Rock Metropolitan District (Leyden Rock) is bound by the Union Pacific Railroad tracks on the north, State Highway 93 on the west, W 82nd Ave on the south, and State Highway 72 (Indiana St) on the east. As the northwest corridor of the City of Arvada continues to expand and develop and is at risk to natural hazards (i.e., fires), there is a need to evaluate the current emergency preparedness features (i.e., roadway network, planning, resources) that can support emergency response and evacuation activities.

In coordination with the Leyden Rock Board of Directors, the City of Arvada partnered with Stantec Consulting Services Inc. (Stantec) to conduct an Emergency Preparedness Study on Leyden Rock's existing conditions and areas of opportunities to enhance emergency preparedness. The study was conducted from March 2023 through March 2024 and resulted in a series of six (6) memorandums and a final report. The final report includes but is not limited to the following:

- Recommendations for the transportation network
- Identification of gaps in plans and evacuation preparedness
- Recommendations for communication and emergency responders

As part of the study, Stantec conducted various public engagement activities to discuss resident concerns, transportation challenges, and proposed solutions aimed to mitigate evacuation congestion and coordination challenges. Public engagement activities include:

- Three (3) in-person public meetings
- One (1) initial web-based survey
- Educational Materials
- Targeted interviews/workshops

Through the process of public engagement, survey analysis, and transportation study, the following short term and long-term recommendations were ranked as the highest priority and were presented to Leyden Rock Metropolitan District and the City of Arvada:

- Establish a Neighborhood (Social) Network
- Update Emergency Operations Plans
- Conduct Evacuation Ready Workshops (CERT, Arvada Fire)
- Finalize and Publish Communication Flowchart and Web Resources
- Enhance W 82nd Ave Shoulder Areas, Widen SH-72 (Indiana St) at UPRR

Using the Action Plan included at the end of this Final Report, the assigned City department will work to implement the described recommendation(s) within the timeframe listed.

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Acronyms And Abbreviations

- AFPD ..... Arvada Fire Protection District
- CERT ..... Community Emergency Response Team
- City ..... City of Arvada
- CIP ..... Capital Improvement Program
- CO-72 ..... Coal Creek Canyon Road
- CDOT ..... Colorado Department of Transportation
- CWPP ..... Community Wildfire Protection Plan
- DRCOG ..... Denver Regional Council of Governments (DRCOG)
- EPS ..... Emergency Preparedness Study
- Indiana St ..... State Highway 72
- Leyden Rock ..... Leyden Rock Metropolitan District
- PD ..... Arvada Police Department
- Stantec ..... Stantec Consulting Services Inc.
- TIA ..... Traffic Impact Analysis
- UPRR ..... Union Pacific Railroad
- WUI/PUI ..... Wildfire Urban Interface/ Prairie Urban Interface

1. Introduction

The Leyden Neighborhood Emergency Preparedness Study (EPS) Final Report is rooted in the need to address the risks and hazards posed that may cause and influence a potential evacuation in the Leyden Rock and Leyden Ranch neighborhoods. As Leyden has faced fire incidents, there is an increased concern that the existing emergency procedures and transportation infrastructure may negatively impact the evacuation process. Recommendations within this report aim to maximize life safety in the event of an evacuation with a primary focus on transportation improvements. Additionally, this report provides recommendations focused on emergency processes and procedures to increase whole-community preparedness as well as personal preparedness.



Figure 1. 2021 Fire *Source: Arvada Fire*

1.1 Project Scope

The EPS was conducted following the steps outlined in Table 1. Each step concluded with a memorandum sent to the Arvada Project Manager and socialized amongst City of Arvada (City) staff.

Table 1. Project Scope

Step	Description	Referenced Section
1. Review Background Information	Reviewed the following documentation: • City operational and maintenance policies • Current planned land-uses and relevant existing multimodal plans • City sub-area plans, development plans, land restrictions and agreements • Existing transit services within the study area • Documentation of prior studies or relevant information (e.g., annexation applications, developer-sponsored traffic studies, City staff reports, conditions of approval/reasons for denial, Incident After-Action Reports, etc.)	Section 3. Existing Conditions Analysis
2. Prepare Stakeholder Involvement Plan	Strategized and outlined plan to engage with community throughout study.	Section 2. Stakeholder Engagement

Step	Description	Referenced Section
3. Executed Web Survey	Developed and distributed survey geared towards establishing an initial understanding of the residents' personal preparedness and concerns regarding safety, risks, and preparedness.	Section 2. Stakeholder Engagement
4. Evaluate Study Area	Used public engagement results, emergency plans, and current corridor functions to evaluate strategies associated with the study area.	Section 3. Existing Conditions Analysis
5. Conduct Transportation Study	Performed analysis on the existing roadway lane-capacity, access routes, and neighborhood trip generation rates, establishing scenarios for comparison.	Section 3. Existing Conditions Analysis
6. Identify Areas for Improvement	Identified initial short-term and long-term recommendations for feasibility analysis. proposed to improve emergency response plans and procedures along with transportation issues.	Section 4. Infrastructure Improvement Areas
7. Prioritize Recommendations and Develop Action Plan	Defined criteria and sub criteria to prioritize and rank recommendations. Assigned recommendation owners and timeframe for recommendations in Action Plan.	Section 5. Emergency Preparedness Plan

1.2 Study Area

Leyden Rock is bound by the Union Pacific Railroad tracks on the north, State Highway 93 on the west, W 82nd Ave on the south, and State Highway 72 (Indiana St) on the east. Risks specific to Leyden Rock include:

- **Traffic Congestion**. The only way to enter and exit Leyden Rock is by way of West 82nd, which causes major traffic congestion and puts the community at risk during an evacuation. Additionally, as Northwest Arvada[1] continues to develop, traffic will only worsen around Leyden Rock.
- **Wildfire.** Leyden Rock is located in a wildland-urban interface and is at risk for wildfire due to nearby high grasses and high winds, typical to the area. Specifically, Leyden Rock is likely to be impacted by brush fire, as exhibited by the 2021 fire just north of Leyden Rock, along the Union Pacific Railroad.
- **Access and Functional Needs.** With over 190 people over the age of 65 living in Leyden Rock[2], considerations must be made for those that may be by at higher risk during an evacuation due to additional access and functional needs. Such access and functional needs include, but are not limited to, assistance with evacuation, such as accessible vehicles, alternative forms of notification and communication to receive evacuation alerts, and medical supplies in community shelters.

[1] Refer to Northwest *Arvada Sub-Area Plan, 2022* for additional information on Arvada Development.

[2] Demographics provided by U.S. Census Bureau, 2020.

While evacuation responsibilities are included throughout the City's Emergency Operations Plan, the plan lacks condensed incident specific procedures related to command and control of evacuations and the flow of emergency communications and notifications. While the City Emergency Operations Plan references the need to consider accessibility and functional needs, it does not include specific actions to assist those with access and functional needs during an emergency. Recommendations should include opportunities to engage with public safety personnel related to evacuation and emergency communications.



Figure 13. Emergency Operations Plan and Hazard Mitigation Plan

3.2.6 Mitigation

The City has made mitigation a priority, evident by the following completed mitigation efforts driven by the Hazard Mitigation Plan:

- The City Office of Emergency Management, Arvada Police Department (PD), and JeffCom 911, City staff have continuously reached out to residents and businesses about emergency preparedness and possible mitigation activities through awareness campaigns, events, public outreach, website, social media, and workshops. The City and AFPD are mowing and creating fire defense lines along the railroad right-of-way to mitigate fires sparked by the railroad.
- The City Office of Emergency Management and Neighbors Connected program have continued the "Resilient Arvada" partnership to foster emergency preparedness at the neighborhood level.
- The City is currently updating its Community Wildfire Protection Plan (CWPP) to identify risks associated with development in the Wildfire Urban Interface / Prairie Urban Interface (WUI/PUI) and identify projects that will mitigate the risk.
- AFPD and City Emergency Management have continued collaboration to host joint neighborhood-level resilience and community risk reduction work.
- AFPD is currently working on the development of a Vegetation Management Plan based on outcomes from the CWPP for the area Protection Districts to perform meaningful suppression activities for the fuel types present in the WUI.

While Leyden neighborhood falls under the Jefferson County Hazard Mitigation Plan, it lacks details specific to Leyden Rock and Leyden Ranch and its surrounding areas. Residents expressed concern with regards to mitigation under powerlines in the neighborhood, mitigation along the railroads, and mitigation along W 82nd Ave, and lack of knowledge on the homeowner's responsibility for mitigation. Recommendations related to mitigation will not be included in the official short-term or long-term recommendations as mitigation recommendations shall be included in the update of the Community Wildfire Protection Plan and Jefferson County Hazard Mitigation Plan.

3.2.7 Operational Coordination

Residents expressed concern in the survey responses of having enough first responders to assist with directing traffic upon an evacuation order. No formal training and exercise approach exists to ensure the coordinated delivery of evacuation-related support and services. Upon development of an Evacuation Annex, the City should establish a minimum expectation for annual training and exercises for city and department employees to understand their respective roles and responsibilities during an evacuation. Additionally, recommendations should be considered that involve community members to participate in trainings to assist first responders



Figure 14. CWPP Kickoff Meeting

during an emergency or evacuation scenario.

3.3 Traffic Analysis - Existing Conditions in the Study Area

As part of the study, analysis was performed on the existing roadway and traffic conditions. The study was conducted to validate the infrastructure and emergency preparedness plans as a baseline for comparison with future scenarios. The findings of existing road conditions and traffic analysis, along with supporting data from the public survey are below.

3.3.1 Existing and Planned Roadway Network

Residents expressed that neighborhood streets are narrow, and with cars parked on both sides of the streets, it is potentially challenging for emergency vehicles to access an emergency. The City project manager noted that all subdivisions were reviewed and approved by AFPD, PD, and Public Works, and Engineering during the development review and approval process. However, with cars parked on both sides of the neighborhood roads, a steady flow of traffic in both directions may create challenges given the 20 feet area in between parked vehicles. A survey respondent expressed concern regarding how dark the roads are surrounding Leyden Rock and difficulty navigating the corners out of the neighborhood. Dark streets will be more difficult to navigate with reduced air quality associated with wildfire smoke. 80 percent of survey respondents selected the existing roadway network as its main cause of greatest concern associated with a potential emergency evacuation.

As traffic congestion and potentially impacted exits by car are presented as a major concern throughout resident survey results, recommendations should be geared towards expanding exiting roadway networks as well as alternative methods of evacuation.

There has been urging from Leyden residents to create an emergency access road through Pattridge Open Space, which sits south of W 82nd Ave. The Quit Claim Deed states that the property would revert to Jefferson County if any portion of the property is “used for any purpose other than by a public entity for public open space, park or recreational purposes…”



Figure 15. Narrow Street in Leyden

The creation of an emergency access road would violate this clause resulting in the property reverting to Jefferson County ownership; therefore, an emergency access road through Pattridge Open Space is not carried forward for consideration. Refer to the attached Quit Claim Deed for details on the open space designation.

There is currently no eastern or northbound exit outside of Leyden due to the Union Pacific Railroad (UPRR) track that runs across the northern boundary of the neighborhood. Though efforts have been made to contact UPRR regarding railroad mitigation, building a crossing over the railroad, or establishing an emergency access road within the right-of-way of the UPRR, UPRR has not acknowledged the efforts or engaged in communication with Leyden Rock or the City.

3.3.2 Emergency Evacuation Focused Traffic Impact Analysis (TIA)

An emergency evacuation focused TIA was conducted to determine possible routes for residents to exit the neighborhood, as well as for emergency vehicles and residents to enter the neighborhood to retrieve belongings or loved ones during an evacuation. It is relevant to note that the analysis does not recommend one evacuation plan as the routing should respond directly to the location of where the incident is occurring.

Based on the size of the neighborhood and data from the Institute of Transportation Engineers Trip Generation Manual (11th Edition), the total number of vehicles within the neighborhood was estimated to be approximately 2,400 vehicles (assigning 1.5 vehicles per house and 1.1 per unit of duplex). However, during technical team meetings, it was shared that people are known to evacuate with all their vehicles in tow. Therefore, for the purpose of stress testing the existing roadway capacity, the technical team decided doubling to an average of 3 vehicles per household for analysis.

The engineered capacity of the existing lane configuration on W 82nd Ave is 1,700 vehicles per hour per lane. In the existing configuration it is not advised to attempt to operate more than two lanes of same-direction outbound traffic on W 82nd Ave due to narrow shoulders and limited lighting. A variety of scenarios were assessed as a threat forcing evacuation may come from several directions. These scenarios proved that a number of evacuation possibilities exist regardless of unknown factors. The scenarios were further broken down into 20-, 40- and 60-minute evacuations while still utilizing the 1,700 vehicle per hour per lane capacity. Possible evacuation routes are presented in the figures below, while also demonstrating the maximum



Figure 16. Existing Directional Signs



Figure 17. Existing Community Message Board

4.1.3 Education and Training

Recommendations focused on education and training involve those related to preparing both residents and city staff in mitigation and notification and response to evacuation-related emergencies.

Table 5. Education and Training Recommendations

Recommendation	Description
Evacuation Ready Workshops	Continue to host recurring community "Evacuation Ready" workshops where the AFPD and PD can educate the community on evacuation preparedness, help residents register, fill out, and train on LookoutAlert and Smart911. Upon creation of the Evacuation Annex, City personnel can educate residents on evacuation phases, communication flow, and the expected actions of first responders.
Bi-Yearly Testing of Alert Stem	Conduct bi-yearly testing of the LookoutAlert system to confirm positive contact with residents and identify geographic "problem areas" where residents are not receiving the alert. The routine testing will show the city which areas may need additional signage or alternative forms of notification until LookoutAlert notifications can be received. A lessons learned memo should be developed following each test to inform future recommendations.
Publish Wildfire Mitigation Information	Publish wildfire mitigation information and emergency notification systems on Leyden Rock Life website, similar to Candelas. The one-page site will hold the Neighborhood Mitigation Plan, any AFPD presentations related to fire mitigation, and provides resources to sign up for emergency alerts.

4.1.4 Operational Coordination

Operational coordination recommendations focus on opportunities to grow a more coordinated operational structure to appropriately prepare for and respond to evacuation events.

Table 6. Operational Coordination Recommendation

Recommendation	Description
Annual Evacuation Tabletop Exercise	Conduct an annual tabletop exercise for City Departments and first responders to exercise the evacuation plan and validate existing procedures. The tabletop exercise will enhance operational coordination between response partners and allow for practice in executing assigned roles and responsibility while also fostering comradery and trust amongst partners. An After-Action Report should be developed following each exercise to inform future recommendations.
Finalize and Publish Communication Flowchart	Finalize the City's Communication Flowchart to demonstrate how communication flows between residents, first responders, and City personnel during an emergency. The flowchart should serve not only as an educational tool but also allow for transparency amongst the community of how coordination is conducted. *See Figure 4*.

4.1.5 Existing and Planned Roadway Network

Recommendations related to the existing and planned roadway network include enhancements to both roads and infrastructure to improve safety and traffic flow.

Table 7. Existing and Planned Roadway Network Recommendations

Recommendation	Description
Add Barrier Reflectors	As there are few lights along W 82nd and visibility will worsen with smoke in the air and potential nighttime evacuations, add barrier reflectors on the medians and ground mounted reflector posts to improve visibility and life safety during evacuations.
Develop Railroad Crossing Location and Design	Development of a conceptual design and feasibility study for a bridge across the railroad is needed prior to construction. The design and feasibility study will allow the City and Leyden community to identify where along the railroad crossing would be located, if it is financially and logistically feasible, and if additional resources will be needed.
Enforce On-Street Parking Ordinances	While neighborhood streets are wide enough to allow for emergency vehicle access with cars parked on both sides of the street, internal neighborhood streets will quickly become congested during an evacuation if cars are having to navigate around those parked along curbs. The enforcement of strategic on-street parking ordinances will enable two-way traffic to readily flow through internal neighborhood streets.
Two Lanes Eastbound and One Westbound Land	Based on the existing pavement width, there is room for three temporary travel lanes in the event of an evacuation. Two outbound (eastbound) lanes allow for added vehicular roadway capacity, while still leaving enough width for one inbound (westbound) lane. The primary purpose of the westbound lane is for emergency vehicles and residents to enter the neighborhood, limiting conflicts with outbound traffic.

Recommendation	Description
Limit Access Roads	Inbound traffic to the neighborhood during an emergency should be assigned to one or two of the access roads, with the other four or five all designated to be outbound only. This allows for maximum vehicular roadway capacity and accesses for residents to evacuate in a timely manner. It is necessary to prohibit outbound traffic at select access points in order to allow for inbound vehicles to safely and effectively enter the neighborhood.
Zonal Evacuation	Establish neighborhood zones for targeted notification and zonal evacuations. A time-based, staggered evacuation using the assigned zones may help with evacuation those most at risk while also improving traffic flow and distribution of resources.

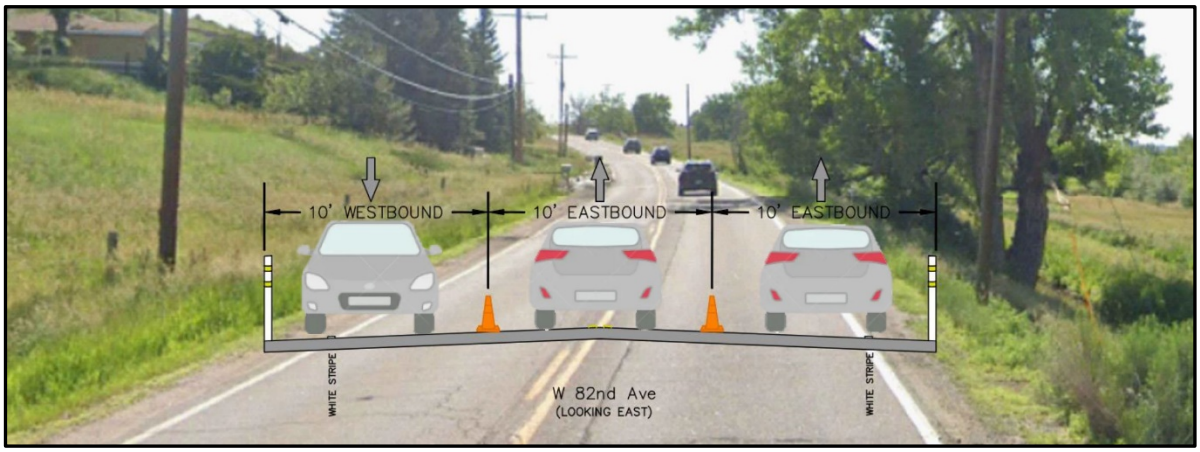


Figure 18. Two Eastbound and One Westbound Lane

4.2 Proposed Long-Term Recommendations for Improvements

The long-term recommendations outlined below are those that have been identified that may take more than five years to complete. All long-term recommendations are related to improving the roadway and transportation network and have been reviewed with the Board prior to the development of this memorandum.

Table 8. Long-Term Recommendations

Recommendation	Description
Expansion of Trail or Sidewalks	Evaluate connectivity of trails and sidewalks from Leyden to potential evacuation shelters, including Ralston Valley High School. As roadway capacity may be exceeded or something inhibits residents from evacuating by vehicle, residents may have to result to evacuate by foot. The extension of trails and sidewalks to temporary or permanent evacuation locations will help in providing residents a path to safety.
Enhance the Roadside Environment	Elements such as reflective delineation, roadway widening and lighting will improve the overall safety and operations of roadway users along W 82nd Ave. Delineation and lighting provide enhanced visibility when daylight is lacking. Roadway widening allows for additional travel lanes that would be permanently implemented. This allows for additional temporary lanes during evacuation.
Widen SH 72 (Indiana St)	The City is currently looking to widen SH 72 to eliminate

5.3 Recommendations Carried Forward

The recommendations carried forward were those that not only ranked the highest but were those that the City agreed upon across departments. Implementation of the recommendations is detailed in the ensuing Action Plan below.

Table 11. Recommendations Carried Forward

Recommendation	Rationale
Invest in Electronic Message Boards and Highway Advisory Radios	Electronic Message Boards at strategic locations (TBD) can provide warnings and alerts, as well as direct traffic during evacuations. Existing message boards could serve to display educational information for preparedness. Highway Advisory Radios will effectively enable emergency messages to be transmitted to motorists in transit.
Update Emergency Operations Plan	The city and its partners are prioritizing updates to the Emergency Operations Plan using the CWPP, public input, and consultant analysis, which includes: • Evacuation Annex with priorities, zonal evacuation phases, and annual reviews • Communication/Notification Protocols • Promoting Smart911 and Lookout Alerts to support individuals with accessibility and functional needs
Conduct Annual Evacuation Ready Workshop	AFPD conducted two workshops in June 2023 related to property protection and neighborhood resiliency. The workshops are tactical offering residents Go Bags with checklists, sign-up information for Smart911/Lookout Alert notifications, and education on personal property measures that can support resiliency.
Establish Neighborhood Network	The City offers a “resilient neighbors” program through existing resources. The program is funded and staffed, offering educational workshops and neighborhood grants to support connecting neighbors, training, and education. Better informed residents can take steps to promote resiliency.
Finalize and Publish Communication Flowchart	The flowchart will be published with informational materials to increase public awareness of the emergency notification process. The City’s emergency preparedness webpage will serve as a resource for public access and awareness
Enhance W 82nd Ave (Roadside) Corridor	The risk reduction zone is based on AFPD analysis and establishes 73-foot buffer areas on both sides of W 82nd Ave to serve as mitigation areas, a protected passage corridor, and to protect fire fighters when defending the corridor. Adding reflective roadside markers, shoulder enhancements, and managed vegetation to establish a risk reduction will create a safer corridor.
SH-72 (Indiana St) Widening	Continue local efforts to widen the CDOT highway to support emergency response needs during traffic congestion. Highway widening address community growth and provides value beyond emergency needs.

5.6 Action Plan

The Action Plan below includes the recommendations carried forward along with a high-level project description, which city department will be the owner of the action, and an anticipated timeframe for the action.

Table 13. Action Plan

Action	Description	Owner	Timeframe
Invest Electronic Message Boards and Advisory Radios	Research and purchase Electronic Message Boards and Advisory Radios. Identify highest traffic points to place the message boards that will provide warnings and alerts, as well as direct traffic during evacuations.	Public Works	>5 Year (Short Term)
Update Emergency Operations Plan	Establish Emergency Operations Plan Update Team and conduct workshops and/or interview to inform the update. The update of the Emergency Operations Plan shall include the following: ▪ Evacuation Annex with priorities/decision tree, evacuation phases, and anticipated actions. ▪ Communication/Notification flowchart	Emergency Manager	>5 Year (Short Term)
Conduct Annual Evacuation Ready Workshop	Continue to host a community **"**Evacuation Ready" workshops where Fire/PD can educate the community on evacuation preparedness, help them register, fill out, and train on LookoutAlert and Smart911. Work with metropolitan districts to advertise all preparedness activities.	Arvada Fire and Police Department	>5 Year (Short Term)
Improve Neighborhood Network	Better inform residents on how they can take steps to promote resiliency. Work with metropolitan districts to identify cadence of neighborhood meetings and opportunities to grow the "resilient neighbors" program.	Comm. Development	>5 Year (Short Term)
Enhance W 82nd (Roadside) Corridor	Place reflective roadside markers along 82nd exiting the Leyden neighborhood and beyond. Establish a risk reduction zones along W 82nd Ave corridor through the enhancement of shoulders and vegetation mitigation.	Public Works	>5 Year (Short Term)
Finalize and Publish Communication Flowchart	Establish a formal review process of the communications flowchart. Seek review from all first responders and city employees that may play a role int he emergency communications process. Include flowchart in existing emergency plans and include in public awareness materials.	Communications and Engagement	>5 Year (Short Term)
Widen SH 72 (Indiana St)	Continue local efforts to widen the CDOT highway to support emergency response needs during traffic congestion by allowing additional ingress and egress to emergency response agencies during an evacuation related incident.	Public Works	5+ Years (Long Term)

SET NO. _____

RALSTON VALLEY HIGH SCHOOL OFFSITE IMPROVEMENTS

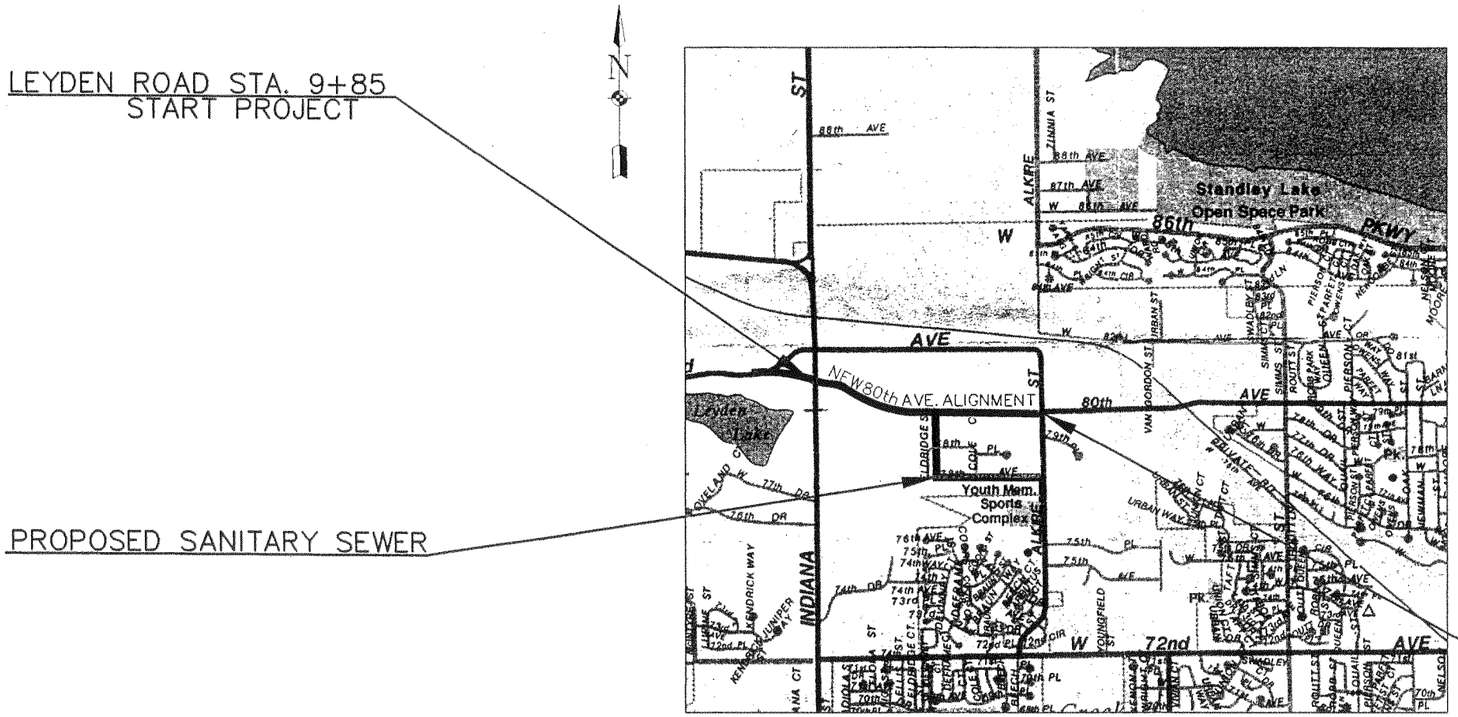
Prepared For

JEFFERSON COUNTY SCHOOL DISTRICT R-1

WEST 80TH AVENUE/ LEYDEN ROAD

CONSTRUCTION DOCUMENT SUBMITTAL

OCTOBER 11, 1999



VICINITY MAP

INDEX TO DRAWINGS

SHT. NO.	DESCRIPTION
1	COVER SHEET
TS-1 TO TS-3	TYPICAL SECTIONS
Q-1 TO Q-6	QUANTITY TABULATIONS
PP-1 TO PP-9	PLAN & PROFILES
GR-1 TO GR-3	INTERSECTION GRADING PLANS
SD-1 TO SD-5	STORM DRAINAGE
E-1 TO E-2	EROSION CONTROL PLANS
SIG-1	INTERSECTION SIGNAL PLAN
T-1 TO T-10	SIGNING & STRIPING PLANS
TC-1 TO TC-4	TRAFFIC CONTROL PLANS
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L-1 TO L-4	LIGHTING & CONDUIT PLANS
SAN-1 TO SAN-3	OFFSITE SANITARY SEWER
ST-1 TO ST-4	OFFSITE STORM SEWER
1-7	WEST 76TH AVE SANITARY SEWER

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5		
4		
3 INDIANA ST REVISIONS	4/24/00	
2 WET UTILITIES REVISIONS	3/22/00	
1 RE-ISSUE #1	2/29/00	

PROJECT ENGINEER/ARCHITECT GLS DATE
PROJECT MANAGER SMcQ DATE
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SCALE DATE ISSUED 7/99

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PROJECT: LEYDEN ROAD REALIGNMENT
JEFFERSON COUNTY

TITLE OF DRAWING: Cover Sheet

PROJECT NO 15345
DRAWING NO 1

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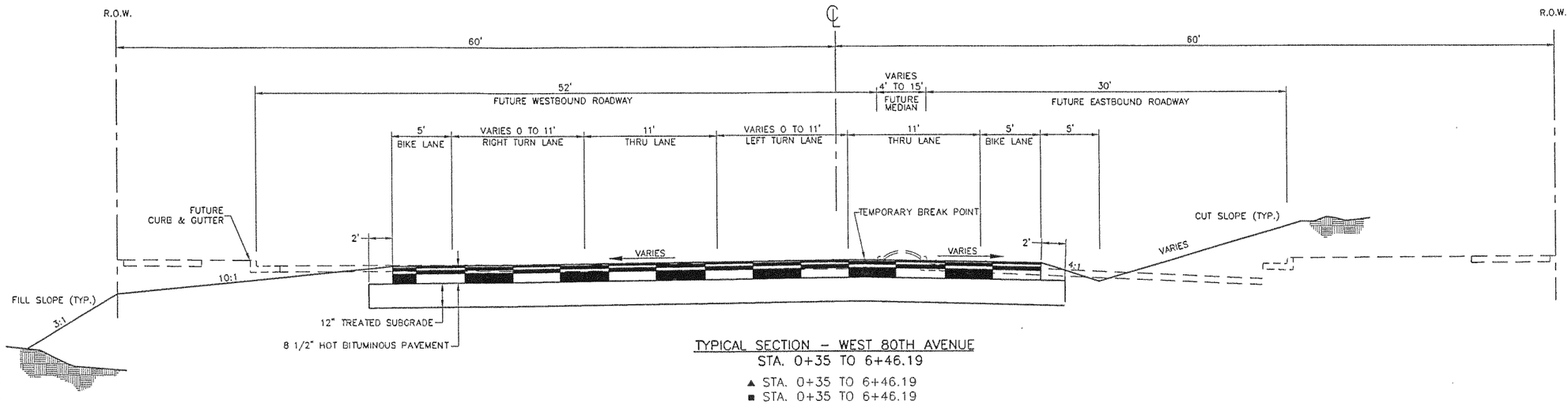
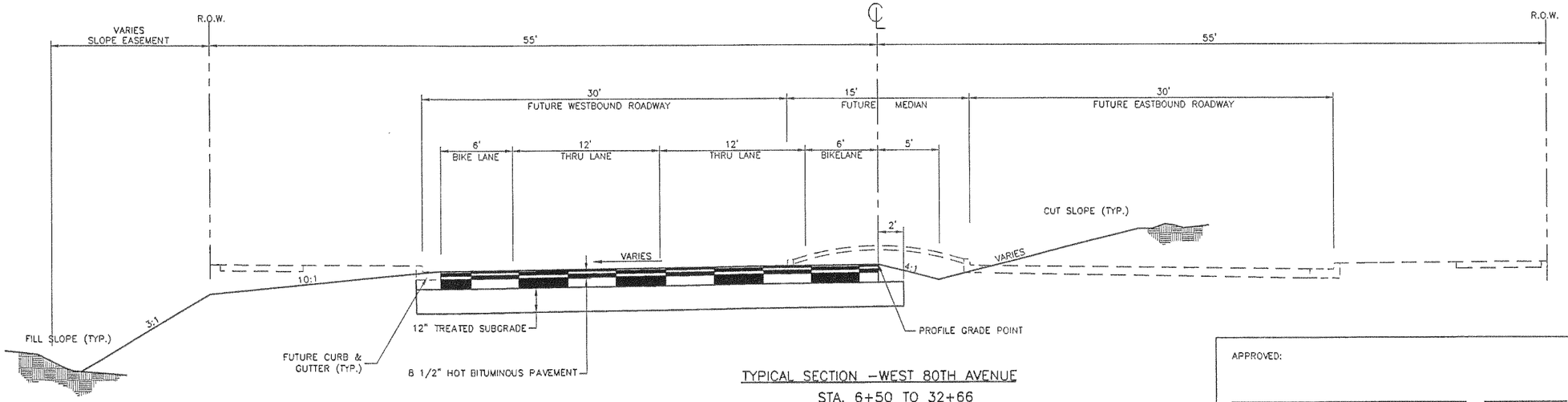
SBD-2



TYPICAL SECTION – WEST 80TH AVENUE
STA. 0+35 TO 6+46.19

▲ STA. 0+35 TO 6+46.19
■ STA. 0+35 TO 6+46.19



TYPICAL SECTION –WEST 80TH AVENUE
STA. 6+50 TO 32+66

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RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
TYPICAL SECTIONS

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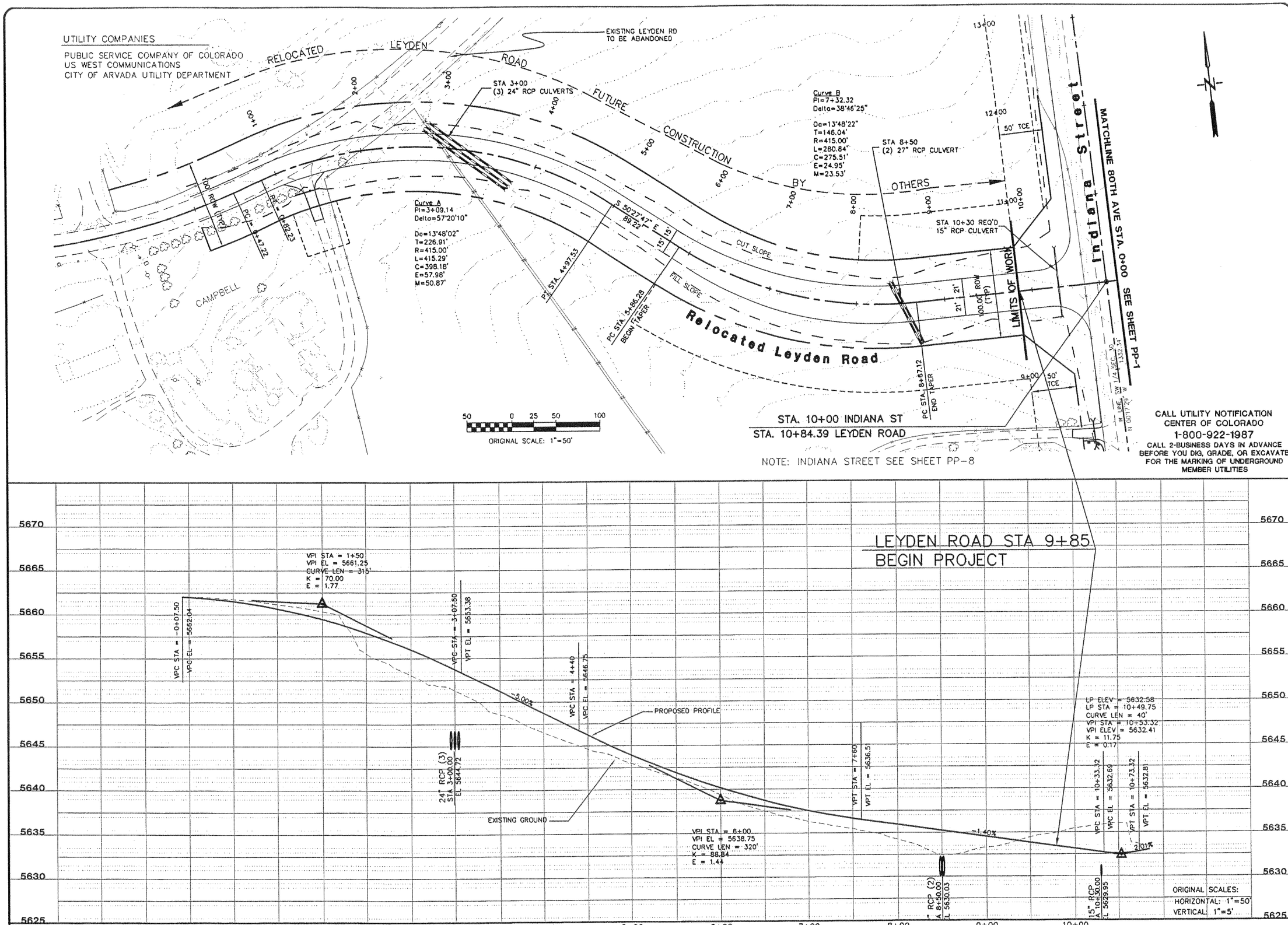

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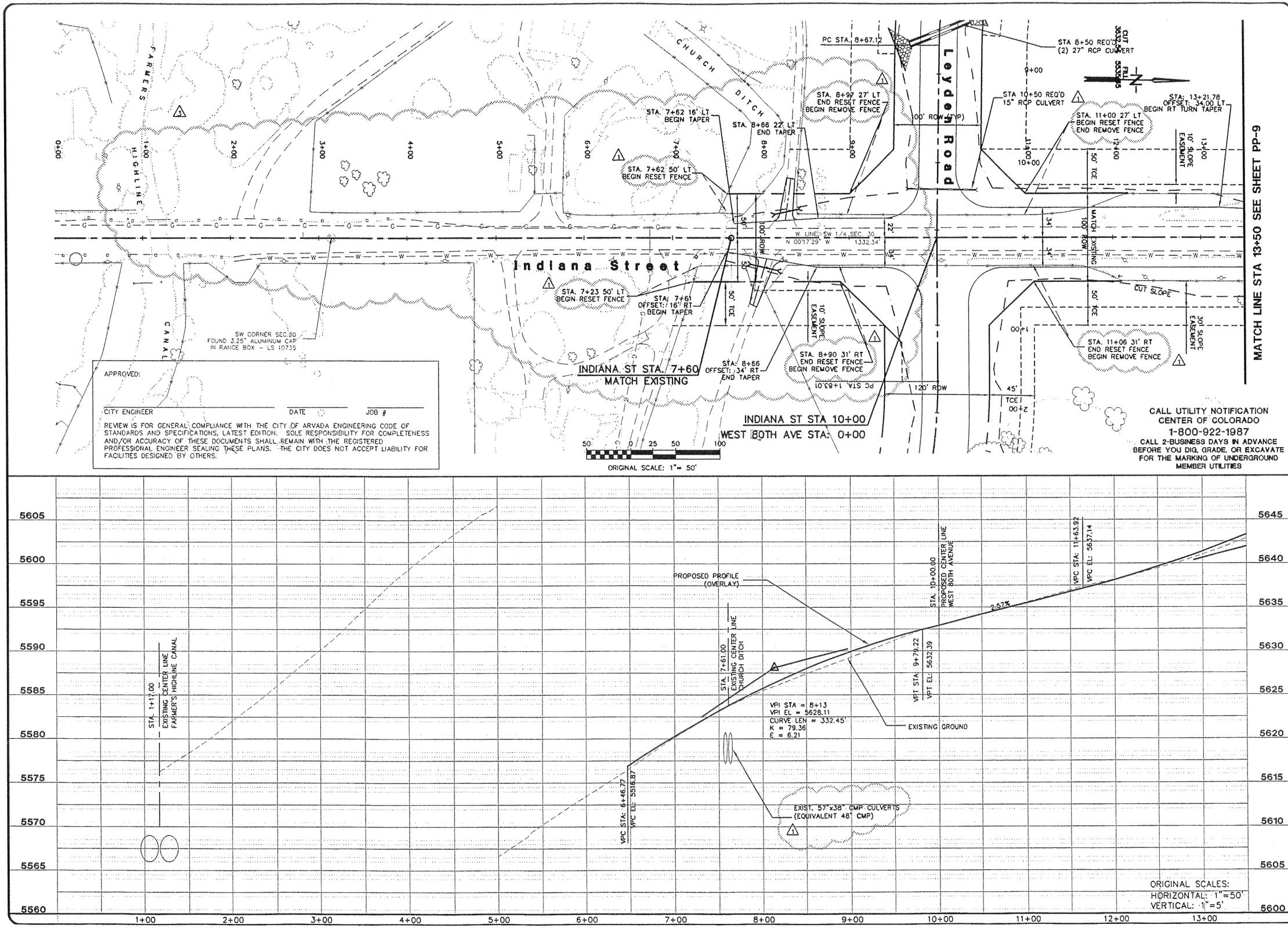

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1 RE-ISSUE #1	2/29/00	

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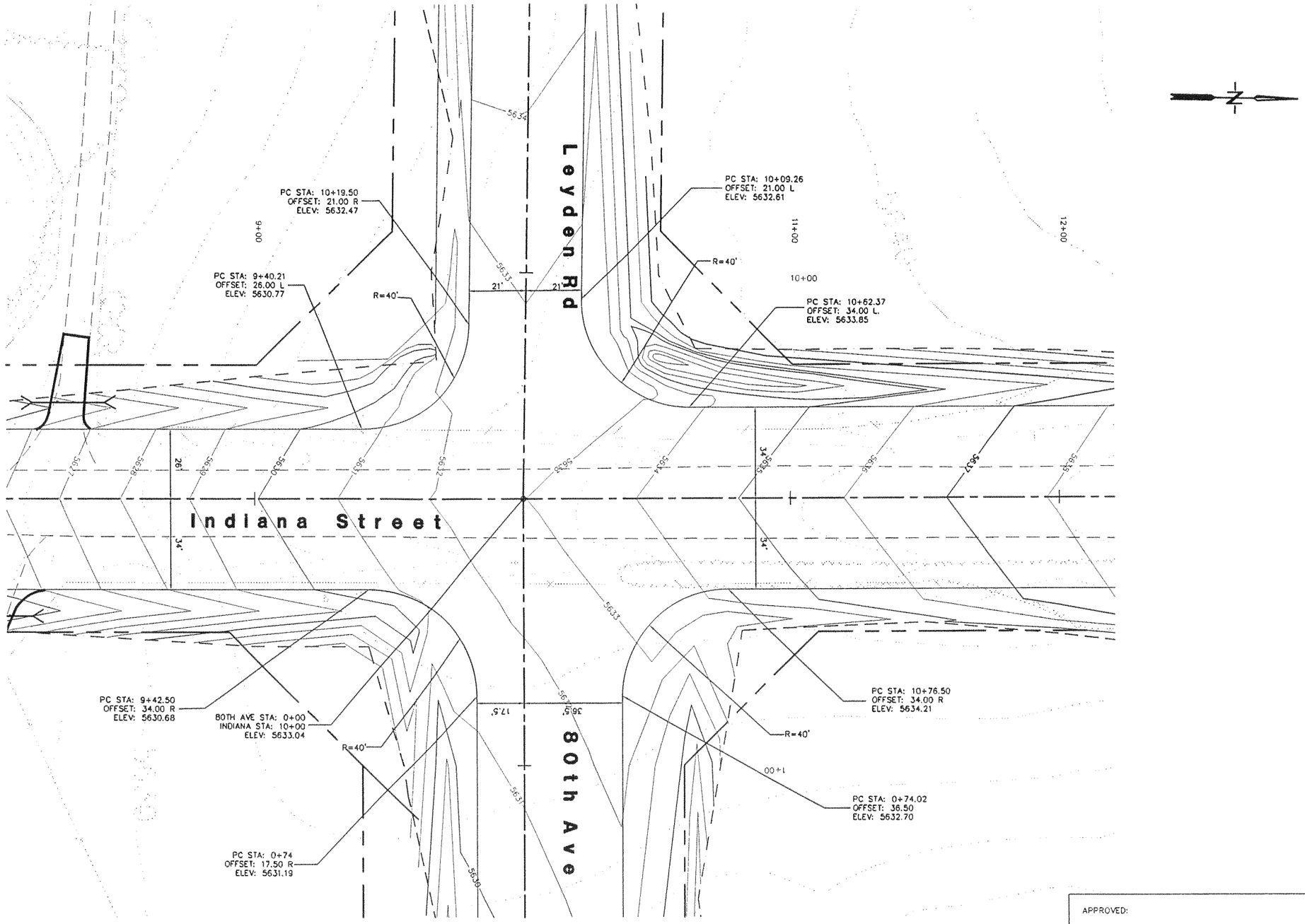

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TITLE OF DRAWING
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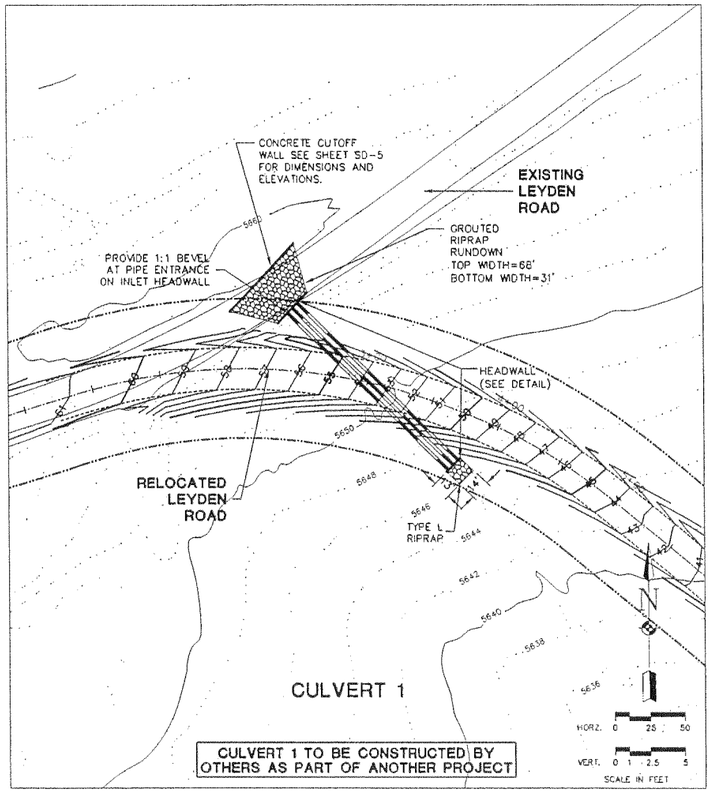
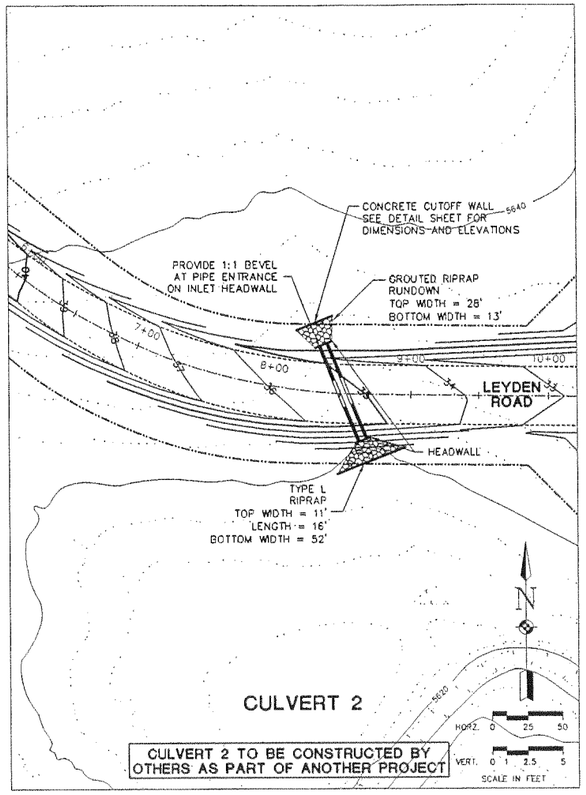
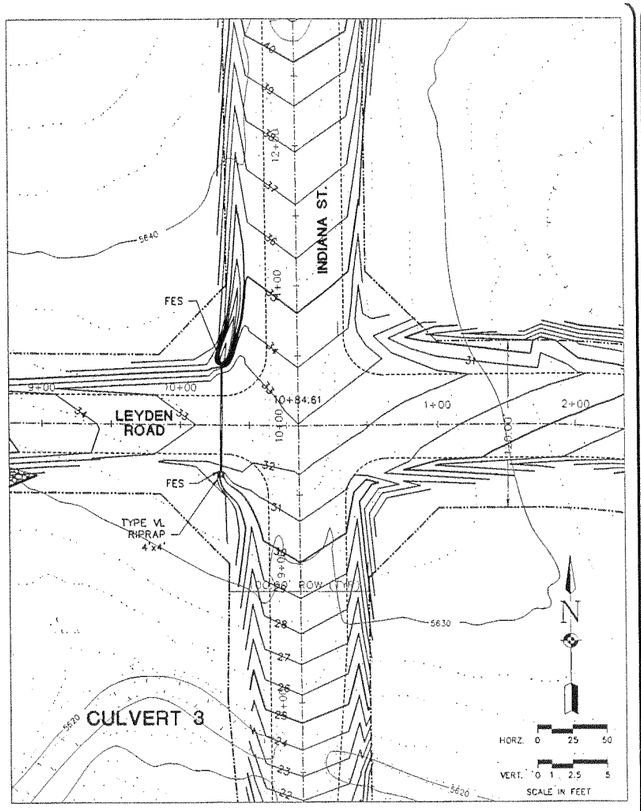
SBD-2







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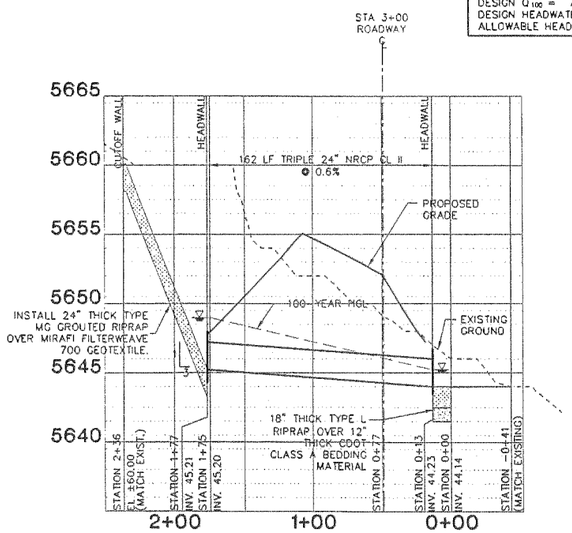

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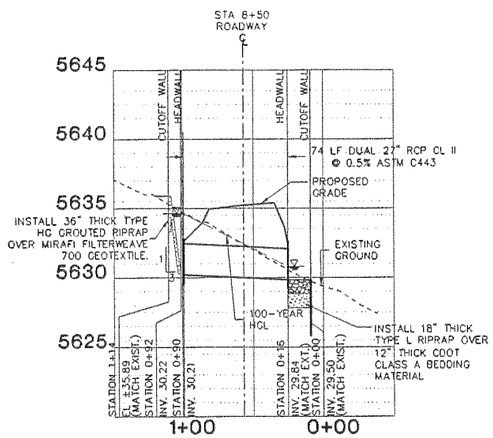

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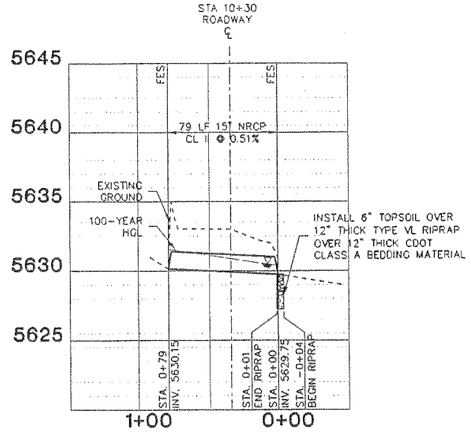

CULVERT 3

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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PROJECT
JEFFERSON COUNTY SCHOOL DISTRICT
80th AVENUE EXTENSION

TITLE OF DRAWING
CULVERT PLAN AND PROFILE

PROJECT NO
15345
DRAWING NO
SD-4

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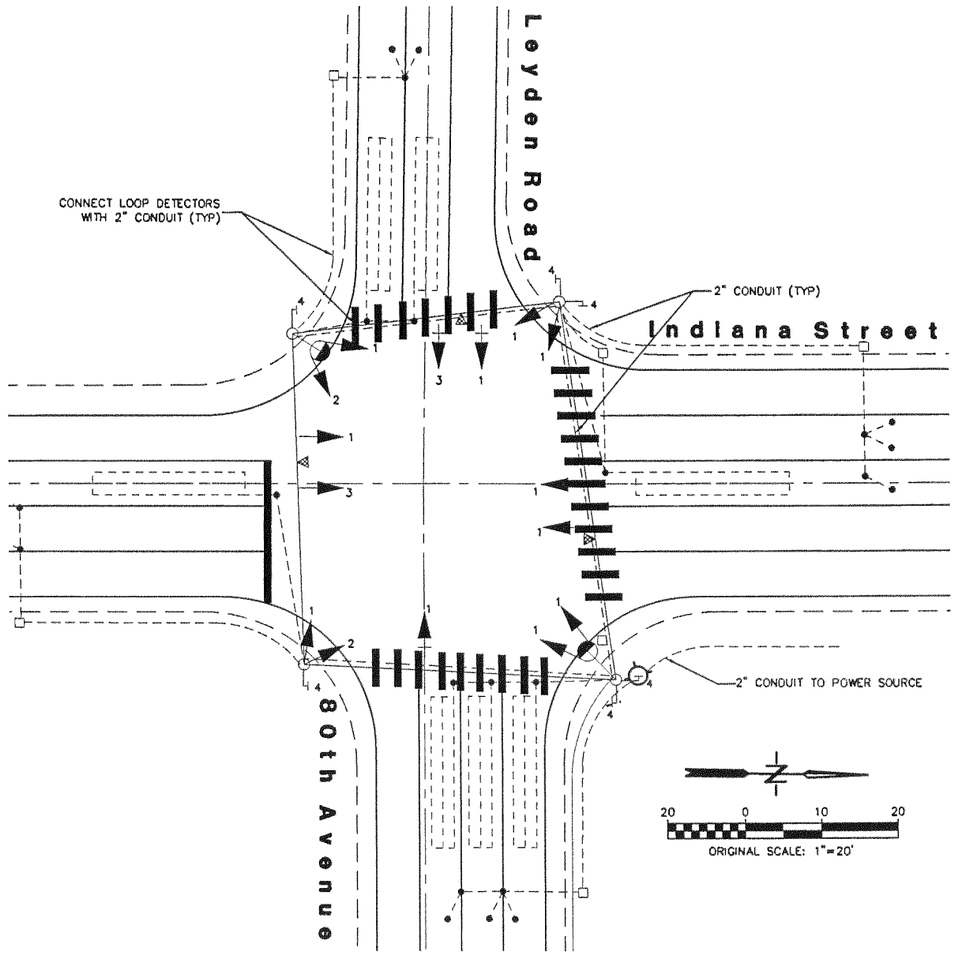
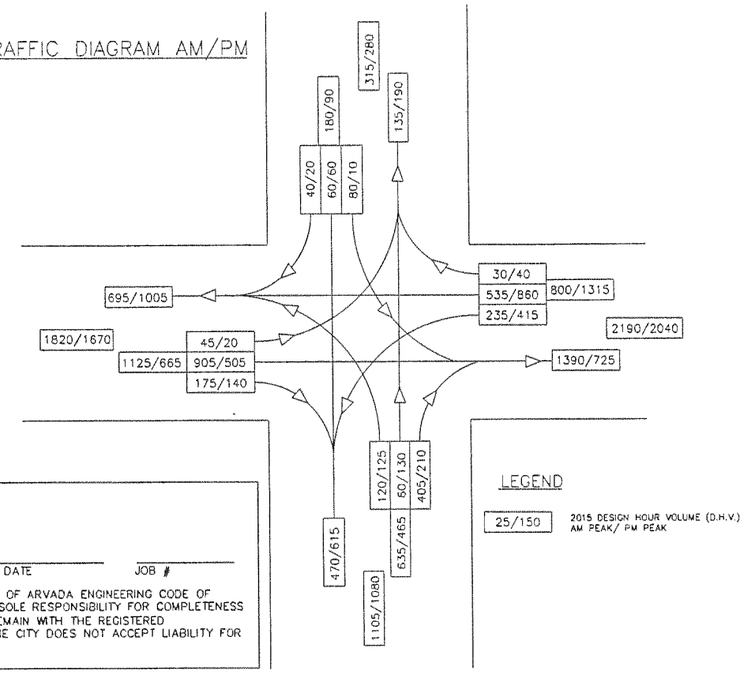


TRAFFIC SIGNAL PLAN

D.H.V. TRAFFIC DIAGRAM AM/PM



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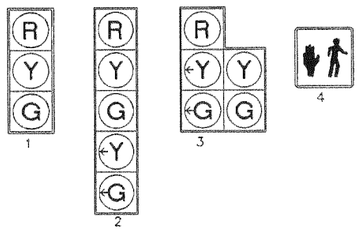
LEGEND

SYMBOL	ITEM
○	TRAFFIC SIGNAL POLE
○→	TRAFFIC SIGNAL FACE W/ BACKPLATE
→○	TRAFFIC SIGNAL FACE
⊢○	PEDESTRIAN SIGNAL FACE
▷	PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b)
⬡	TRAFFIC SIGNAL CONTROLLER AND CABINET
□	PULL BOX - TYPE I (30"x18")
□	PULL BOX - TYPE II (18"x12")
⊗	PULL BOX - SPECIAL
———	CONDUIT - PVC SCHEDULE 40, TYPE 2
≡≡≡≡≡	VEHICLE LOOP DETECTOR (6'x40')
●—	MICROLOOP DETECTOR W/SAWCUT LEAD-IN
⊥	MAST ARM MOUNTED SIGN
⊥	POST MOUNTED SIGN
⊥	EXISTING POST MOUNTED SIGN
—◐	EXISTING LUMINAIRE
—◐	PROPOSED LUMINAIRE
◁	EMERGENCY VEHICLE DETECTOR

SIGNAL HEAD CONFIGURATIONS



NOTES:

1.) THE TRAFFIC SIGNALS WILL BE CONSTRUCTED IN TWO PHASES. PHASE 1 WILL INCLUDE UNDERGROUND CONDUIT, LOOP DETECTORS, AND STREET LIGHTING ONLY. PHASE 2 WILL BE COMPLETED AT SUCH TIME AS TRAFFIC WARRANTS ARE MET AND WILL INCLUDE THE REMAINING ITEMS TO MAKE THE SIGNALS OPERATIONAL.

2.) THE COST OF WIRING SHALL BE INCLUDED IN THE COST OF THE TRAFFIC SIGNALS.

3.) THE COST OF PULL BOXES SHALL BE INCLUDED IN THE COST OF CONDUIT.

4.) SEE LIGHTING PLANS FOR LIGHTING QUANTITIES.

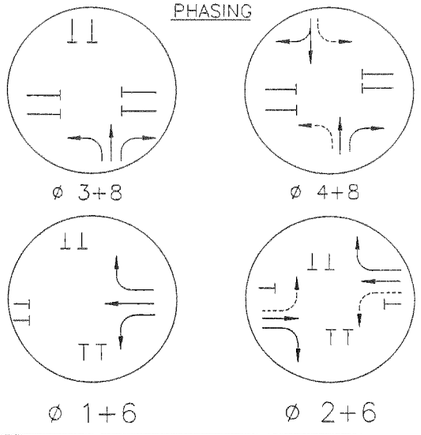
5.) PEDESTRIAN PUSH BUTTONS SHALL INCLUDE DECAL SIGN (R10-4) WHICH INCLUDES PEDESTRIAN INSTRUCTIONS AND DIRECTIONAL ARROWS TO DESIGNATE THE APPROPRIATE CROSS WALK.

6.) CDOT RADIO COMMUNICATIONS HARDWARE SHALL BE PLACED AT NORTHEAST TRAFFIC SIGNAL POLE. SEE DETAIL INCLUDED IN PROJECT SPECIFICATIONS. COST SHALL BE INCLUDED IN COST OF TRAFFIC SIGNAL CONTROLLER.

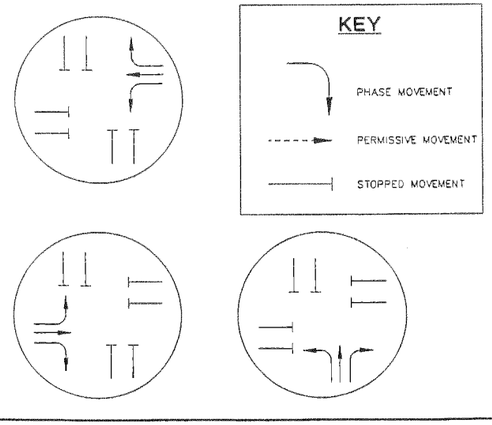
LIST OF MATERIALS

ITEM DESCRIPTION	UNIT	QUANTITY
2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	1000
LUMINAIRE HIGH PRESSURE SODIUM (250 WATT)	EACH	2
TRAFFIC SIGNAL FACE (12-12-12)	EACH	10
TRAFFIC SIGNAL FACE (12-12-12-12-12)	EACH	4
PEDESTRIAN PUSH BUTTON	EACH	6
PEDESTRIAN SIGNAL FACE (16)	EACH	6
LOOP DETECTOR WIRE	LF	2600
FIRE PRE-EMPTION UNIT	EACH	3
LOOP DETECTOR (MICRO TYPE)	EACH	11
TRAFFIC SIGNAL VEHICLE DETECTOR AMPLIFIER	EACH	4
TRAFFIC SIGNAL-LIGHT SPAN WIRE POLE (12 INCH)	EACH	4
TRAFFIC SIGNAL CONTROLLER (TYPE 170)	LF	1

PHASING



FIRE PREEMPTION PHASING



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5							
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2							
1							
	REVISIONS					DATE	BY

PROJECT ENGINEER/ARCHITECT DATE
QLS
PROJECT MANAGER DATE
SMcG
DEPT./BRANCH/AFFIHATE/MANAGER DATE

DRAWN BY DATE DRAWN 7/99
QLS
SCALE 1"=20' DATE ISSUED 7/99

THE SEAR-BROWN GROUP
FULL-SERVICE DESIGN PROFESSIONALS
2420 WEST 26TH AVENUE, SUITE 400D
DENVER, CO 80211-5305
(303) 458-5528

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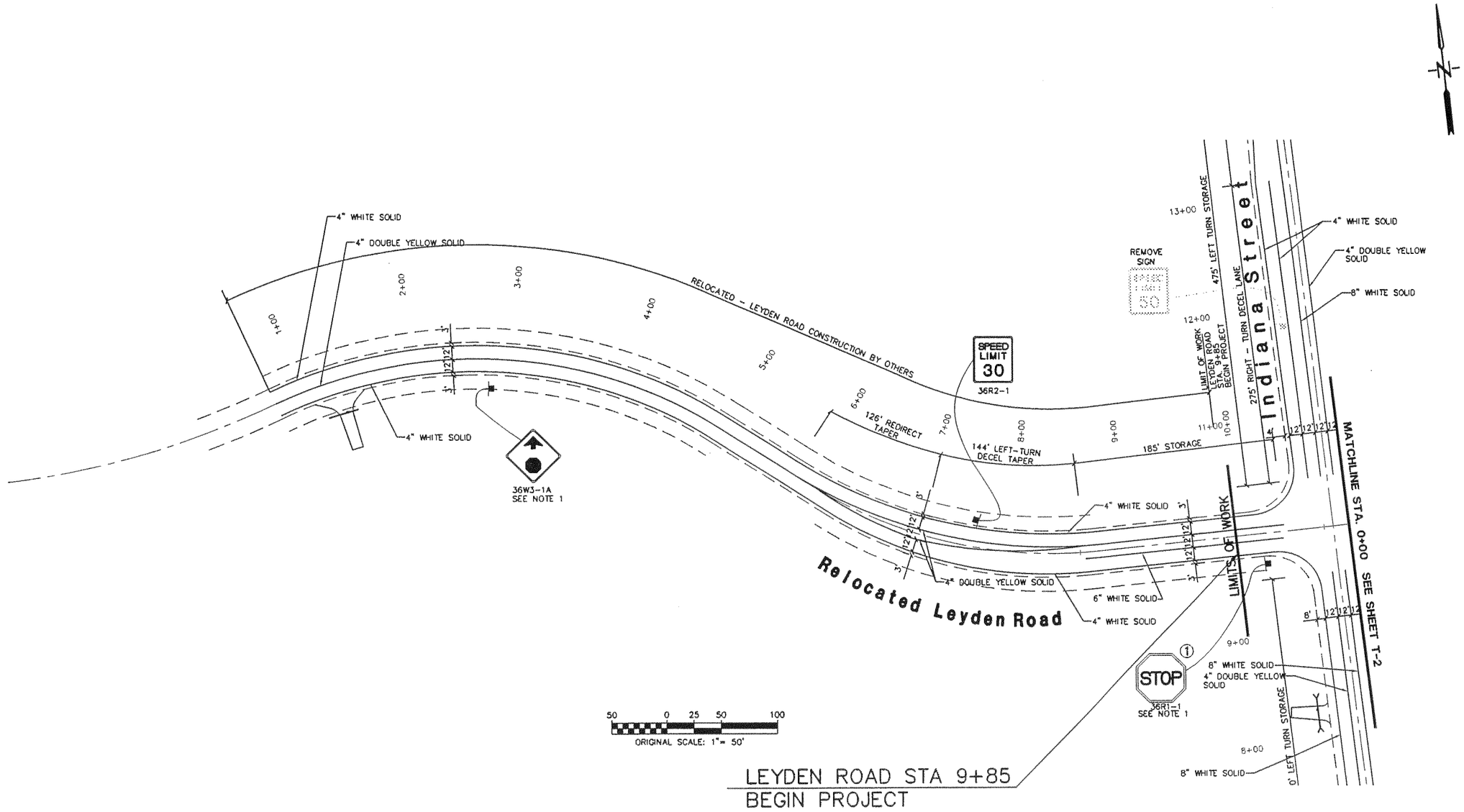
PROJECT
RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
Indiana St/80th Ave Signal Plan

PROJECT NO.
15345
DRAWING NO.
SIG-1

22X34
SBD-2



NOTES: 1. SIGN TO BE REMOVED OR REPLACED WITH ANOTHER SIGN ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION.

Plotting Parameters
Plotted By: Gerrit Slatter
Drawing File: L:\JOBS\15345\civil\roads\Cd.dwg\T-01.dwg
Plotted: Thursday, January 20, 2000, 3:56:55 PM
Plot Config.

REVISIONS	DATE	BY
7		
6		
5		
4		
3		
2		
1		

PROJECT ENGINEER/ARCHITECT GLS DATE
PROJECT MANAGER SMcQ DATE
DEPT./BRANCH/AFFILIATE/MANAGER DATE
DRAWN BY GLS DATE DRAWN 7/99
SCALE 1"=50' DATE ISSUED 7/99

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DENVER, CO 80211-5305
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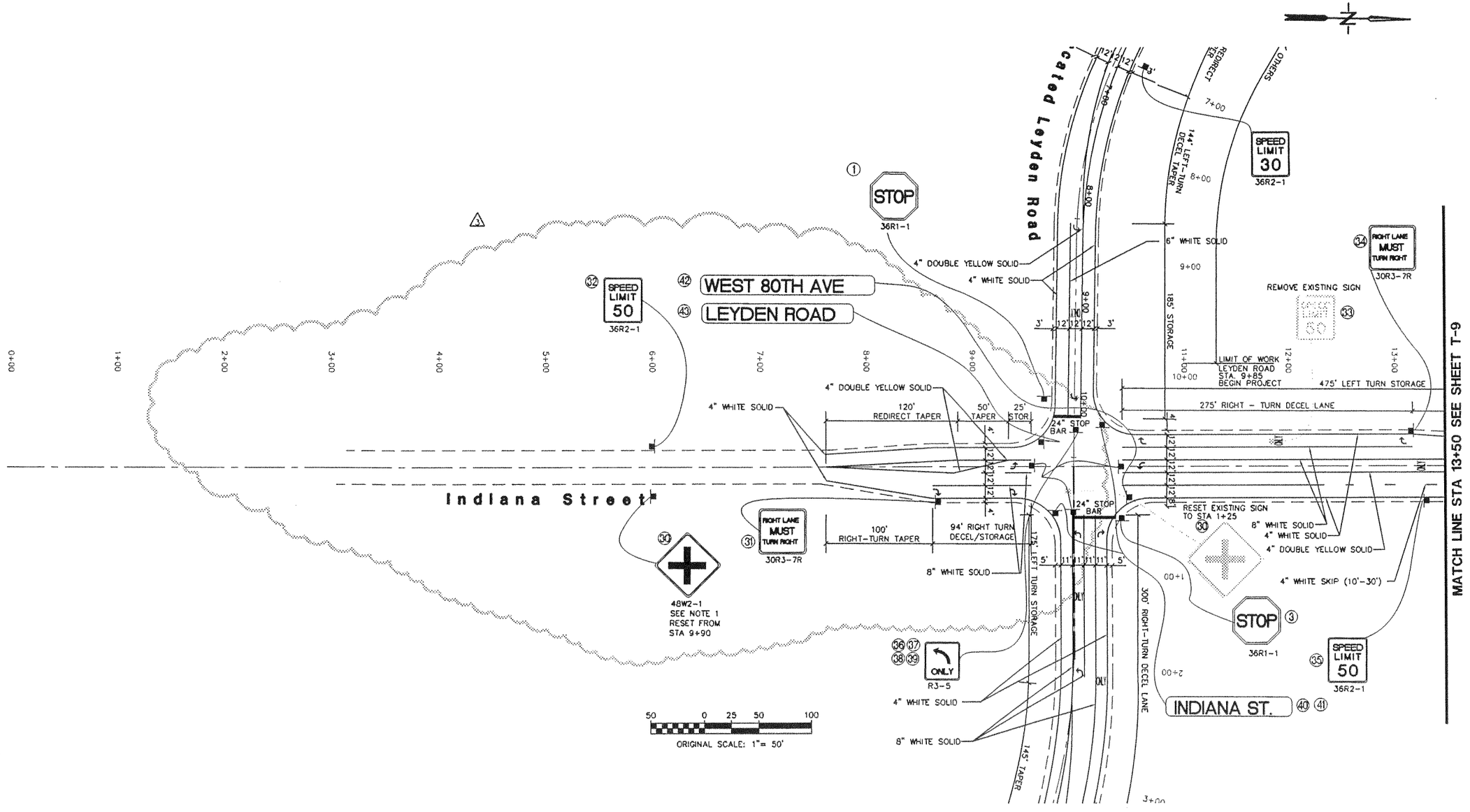
PROJECT
RALSTON VALLEY HIGH SCHOOL
OFFSITE IMPROVEMENTS
JEFFERSON COUNTY
SCHOOL DISTRICT R-1

TITLE OF DRAWING
Leyden Rd Signing/Striping

PROJECT NO.
15345
DRAWING NO.
T-1

22X34
SBD-2

Plotting Parameters
Plotted By: Gerri Slatter
Drawing File: L:\JOBS\15345\civil\roads\Cd-dwg\T-0702.dwg
Plotted: Monday, April 24, 2000, 9:14:46 PM
Plot Config



NOTES:
1. SIGN TO BE REMOVED OR REPLACED WITH ANOTHER SIGN ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION.
2. STREET NAME SIGNS AND LANE DESIGNATION SIGNS SHALL BE ATTACHED TO TRAFFIC SIGNAL SPAN WIRE.
3. STOP BAR PAVEMENT MARKINGS TO BE REPLACED WITH CONTINENTAL TYPE CROSS-WALKS ONCE TRAFFIC SIGNALS ARE INSTALLED AT INDIANA STREET INTERSECTION. SEE TRAFFIC SIGNAL PLANS.

APPROVED:

CITY ENGINEER _____ DATE _____ JOB # _____

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

7			
6			
5			
4	INDIANA ST REVISIONS	4/24/00	
3	WET UTILITIES REVISIONS	3/27/00	
2	RE-ISSUE #1	2/29/00	
	REVISIONS	DATE	BY

PROJECT ENGINEER/ARCHITECT DATE
QLS
PROJECT MANAGER DATE
SMO
DEPT./BRANCH/ATTEMATE/MANAGER DATE
DRAWN BY DATE DRAWN
QLS 10/99
SCALE DATE ISSUED
1"=50' 7/99

THE SEAR-BROWN GROUP
FULL-SERVICE DESIGN PROFESSIONALS
1726 COLE BOULEVARD, SUITE 300
GOLDEN, CO 80401
(303) 271-9388

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PROJECT
LEYDEN ROAD REALIGNMENT
JEFFERSON COUNTY

TITLE OF DRAWING
INDIANA ST SIGNING & STRIPING

PROJECT NO.
15345
DRAWING NO.
T-7

22X34
SBG-2

AS-BUILT SURVEY COMPLETED BY WSB

ENGINEERING REDOR DRAWING COMPLETED BY EVSTUDIO

THESE IMPROVMENTS HAVE BEEN CONSTRUCTED IN SUBSTATNIAL COMPLANCE WITH CONSTRUCTION DRAWINGS APPROVED BY ARVADA

CONSTRUCTION PLANS

FOR

LEYDEN RANCH EAST SUBDIVISION
JEFFERSON COUNTY, CO

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON , STATE OF COLORADO

04/9/2020

OWNER / DEVELOPER

LEYDEN PROPERTIES, LLC
3002 S. HURON STREET
ENGLEWOOD, CO 80110
CONTACT: BRYANT WINSLOW
PHONE: (303) 781-5535
FAX: (303) 761-7413

CIVIL ENGINEER / SURVEYOR

JeHN ENGINEERING, INC.
5690 WEBSTER STREET
ARVADA, CO 80002
CONTACT: ARNOLD NIEMEYER
PHONE: (303) 423-6036
FAX: (303) 467-9438

LANDSCAPE ARCHITECT

PCS GROUP, INC.
#3 INDEPENDENCE PLAZA B-180
1001 16TH STREET
DENVER, CO 80265
CONTACT: JIM IVY
PHONE: (303) 531-4905

UTILITIES

PHONE:
CENTURYLINK
DEVELOPER CONTACT GROUP
P.O. BOX 1720
DENVER, CO 80201
PHONE: (303) 451-2703

CABLE TV:
AT&T CABLE SERVICES
8470 NORTH UMATILLA STREET
FEDERAL HEIGHTS, CO 80260
CONTACT: RICK SHANNON
PHONE: (303) 603-6704
OR (303) 603-6717

GAS AND ELECTRIC:
EXCEL ENERGY OF COLORADO
1123 WEST 3rd AVENUE
DENVER, CO 80223
PHONE: (303) 534-6700

WATER, SANITARY, AND STORM SEWER:
CITY OF ARVADA
8101 RALSTON ROAD
ARVADA, CO 80001
PHONE: (720) 898-7640

FIRE PROTECTION

ARVADA FIRE PROTECTION DISTRICT
KEVIN FERRY, FIRE MARSHAL
7903 ALLISON WAY
ARVADA, CO 80005
PHONE: (303) 424-3012

LEGAL DESCRIPTION

THE UNDERSIGNED, BEING THE OWNERS OF A PARCEL OF LAND SITUATED IN THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6th PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST ¼ CORNER OF SAID SECTION 25, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 25 BEARS SOUTH 00°28'44" EAST A DISTANCE OF 2644.57 FEET;
THENCE SOUTH 00°28'38" EAST, ALONG THE EAST LINE OF SAID SOUTHEAST ¼ OF SECTION 25 A DISTANCE OF 980.20 FEET TO A POINT;
THENCE SOUTH 89°31'12" WEST A DISTANCE OF 50.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF COLORADO HIGHWAY NO. 72 AND THE NORTHERLY RIGHT-OF-WAY LINE OF THE DENVER AND INTERMOUNTAIN RAILWAY COMPANY AS DESCRIBED IN BOOK 173 AT PAGE 338, JEFFERSON COUNTY PUBLIC RECORDS, ALSO BEING THE POINT OF BEGINNING;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING (3) COURSES:

1. SOUTH 00°28'38" EAST, ALONG A LINE 50.00 FEET WESTERLY OF AND PARALLEL WITH SAID EAST LINE OF THE SOUTHEAST ¼ OF SECTION 25, A DISTANCE OF 202.73 FEET TO A POINT;
2. THENCE SOUTH 44°31'22" WEST A DISTANCE OF 70.70 FEET TO A POINT;
3. THENCE SOUTH 00°28'38" EAST A DISTANCE OF 2.75 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LEYDEN ROAD;

THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE THE FOLLOWING TWO (2) COURSES:

1. THENCE NORTH 80°53'15" WEST A DISTANCE OF 10.47 FEET TO A POINT OF CURVE;
2. THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 291.03 FEET, A CENTRAL ANGLE OF 38°05'50", WHOSE CHORD BEARS SOUTH 80°03'51" WEST A DISTANCE OF 189.96 FEET, FOR AN ARC DISTANCE OF 193.51 FEET;

THENCE SOUTH 30°47'41" EAST, A DISTANCE OF 26.49 FEET;
THENCE SOUTH 57°26'32" WEST, A DISTANCE OF 40.15 FEET;
THENCE SOUTH 55°46'01" WEST, A DISTANCE OF 37.41 FEET;
THENCE SOUTH 53°09'56" WEST, A DISTANCE OF 430.40 FEET;
THENCE SOUTH 54°55'37" WEST, A DISTANCE OF 48.50 FEET;
THENCE SOUTH 55°37'21" WEST, A DISTANCE OF 39.25 FEET;
THENCE SOUTH 58°13'34" WEST, A DISTANCE OF 4.93 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 792.99 FEET, A CENTRAL ANGLE OF 02°28'04", WHOSE CHORD BEARS SOUTH 57°55'34" WEST A DISTANCE OF 34.15 FEET, FOR AN ARC DISTANCE OF 34.15 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 465.00 FEET, A CENTRAL ANGLE OF 06°51'39", WHOSE CHORD BEARS SOUTH 87°03'33" WEST A DISTANCE OF 55.65 FEET, FOR AN ARC DISTANCE OF 55.68 FEET;
THENCE ALONG A NON TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 768.44 FEET, A CENTRAL ANGLE OF 23°46'50", WHOSE CHORD BEARS SOUTH 74°43'02" WEST A DISTANCE OF 316.66 FEET, FOR AN ARC DISTANCE OF 318.94 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND SHOWN AS SCHEDULE NO. 199861 BY THE JEFFERSON COUNTY ASSESSOR;

THENCE ALONG THE BOUNDARY OF SAID PARCEL OF LAND THE FOLLOWING TWO (2) COURSES:

1. THENCE NORTH 12°00'56" EAST A DISTANCE OF 561.28 FEET TO A POINT;
2. THENCE NORTH 41°20'58" EAST A DISTANCE OF 351.52 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN BOOK 2315 AT PAGE 979, JEFFERSON COUNTY PUBLIC RECORDS;

THENCE SOUTH 59°10'08" EAST, ALONG SAID SOUTHWESTERLY LINE, A DISTANCE OF 407.33 FEET TO A POINT OF NON-TANGENCY, SAID POINT BEING ON SAID NORTHERLY RIGHT-OF-WAY LINE OF DENVER AND INTERMOUNTAIN RAILWAY COMPANY;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE ALONG A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 25°53'09", A RADIUS OF 982.00 FEET, AN ARC LENGTH OF 443.66 FEET, AND A CHORD BEARING NORTH 68°11'33" EAST A DISTANCE OF 439.90 FEET TO THE POINT OF BEGINNING;
CONTAINING 452,324 SQ. FT. OR 10.384 ACRES±.

COUNTY OF JEFFERSON,
STATE OF COLORADO

HORIZONTAL DATUM

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS-DREXEL GROUP ALTA/ACSM SURVEY 7-21-06

VERTICAL DATUM - SITE BENCHMARK

PROJECT BENCHMARK: EAST ¼ CORNER SECTION 25, T. 2 S., R. 70 W., 6TH PM, A 2-1/2" ALUMINUM CAP IN A RANGE BOX LS 28286 DATED 2006. ELEVATION = 5717.92 CITY OF ARVADA

PROJECT DATUM: CITY OF ARVADA ELEVATION = NAVD 88 - 2.5'

BASIS OF BEARINGS

BASIS OF BEARING: BEARINGS ARE BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, JEFFERSON COUNTY, COLORADO AS BEING MONUMENTED AT THE SOUTHEAST CORNER WITH A 2.5" ALUMINUM CAP IN A RANGE BOX PLS 11434 AND AT THE EAST QUARTER CORNER WITH A 2.5" ALUMINUM CAP IN A RANGE BOX PLS 11434 WITH REFERENCE TIES BEARING NORTH 00°28'38" WEST A DISTANCE OF 2644.75 FEET.

LEGEND

	EXISTING	PROPOSED
BOUNDARY		
RIGHT-OF-WAY		
LOT LINE		
SANITARY SEWER	8" SAN	8" SAN
STORM SEWER	18" STM	18" STM
WATER LINE	8" WAT	8" WAT
WATER SERVICE		W/S
SANITARY SERVICE		S/S
IRRIGATION LINE	EXIST PIPE	18" IRR
EASEMENT LINE		
CONTOUR LINE	801	801
CURB & GUTTER		
SECTION LINE		
FENCE		
SANITARY SEWER MH	Ⓢ	●
STORM SEWER MH	Ⓓ	●
WATER MH	Ⓦ	
TELEPHONE MH	Ⓣ	
WATER VALVE	⋈	⋈
FIRE HYDRANT		

CITY OF ARVADA STANDARD DETAILS

SURFACE DRAINAGE
SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD-11
SD-14
SD-18
SD-19
SD-21
SD-22

STREETS
ST-4
ST-10
ST-11
ST-12
ST-17

TRAFFIC
TR-1
TR-9

SANITARY
SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
SS-7
SS-13

STORM WATER
SW-1
SW-3
SW-4
SW-5
SW-6
SW-7
SW-8
SW-8a
SW-9
SW-9a
SW-10
SW-11

WATER
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WATER
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W-59
W-65

WATER METERS
W-31
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W-45

WATER METER VAULTS
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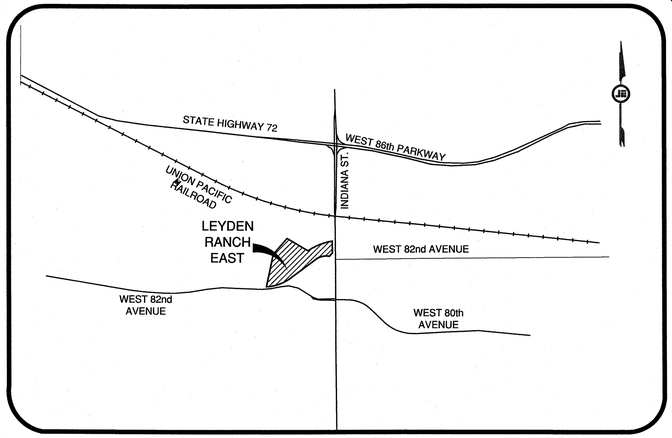
W-43



VICINITY MAP

SCALE: 1"=1200'

Sheet List Table

Sheet Number	Sheet Title
0.0	COVER SHEET
0.1	GENERAL NOTES
0.2	PUBLIC IMPROVEMENT QUANTITIES
1.0	OVERALL GRADING PLAN
1.1	DETAILED GRADING
1.2	EROSION CONTROL INITIAL
1.3	EROSION CONTROL INTEREM
1.4	EROSION CONTROL FINAL
2.1	OVERALL UTILITY PLAN
2.2	SITE PLAN
2.3	HORIZONTAL CONTROL PLAN
3.1	WEST 82nd PLACE
3.2	WEST 82nd PLACE AND EMERGENCY ACCESS ROAD
3.3	JOYCE CIRCLE
3.4	LEYDEN ROAD IMPROVEMENTS
3.5	WEST LEYDEN TRAIL CONNECTION
4.1	STORM DRAIN AND IRRIGATION DRAIN - PLAN & PROFILE
4.2	RAIN GARDEN PLAN AND DETAILS
4.3	RAIN GARDEN PLAN & PROFILE
4.4	OFFSITE RUNOFF BYPASS PLAN & PROFLE
4.5	HEADWALL DETAILS
5.1	DETENTION POND AND OUTLET STRUCTURE DETAILS
5.2	POND FOREBAY AND TRICKLE CHANNEL DETAIL
6.1	WEST 82nd PLACE
6.2	JOYCE CIRCLE
6.3	LEYDEN ROAD
7.1	WEST 82nd PLACE - 1
7.2	WEST 82nd PLACE - 2
7.3	JOYCE CIRCLE
8.1	SIGNAGE AND STRIPING PLAN
8.2	LEYDEN ROAD (W 82nd) STRIPING PLAN
9.0	DETAILS

RESPONSIBILITY STATEMENT

THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN OR DIMENSIONS AND ELEVATIONS ON THE PLANS. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

APPROVALS

THESE CONSTRUCTION PLANS FOR LEYDEN RANCH EAST SUBDIVISION WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS.

JOSEPH A. JEHN, P.E. NO. 15756
JEHN ENGINEERING

23 July 20
DATE

APPROVED:

Jenny Wolfschlag P.E.
CITY ENGINEER

7/23/20
DATE

3363
JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

UTILITY NOTIFICATION CENTER
The Promise.com
FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REVISED PER CITY COMMENTS	3/4/15	BWV
2	REVISED PER CITY COMMENTS	4/29/15	MB
3	REVISED PER CITY COMMENTS	11/6/19	AHN
4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

JeHN ENGINEERING
8690 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN RANCH EAST
COVER SHEET
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111COVR.dwg
APPROVED BY:
JOB NUMBER: 2016-213-111
DATE: 04/9/2020
SCALE: NA
SHEET NO: 0.0 OF 30

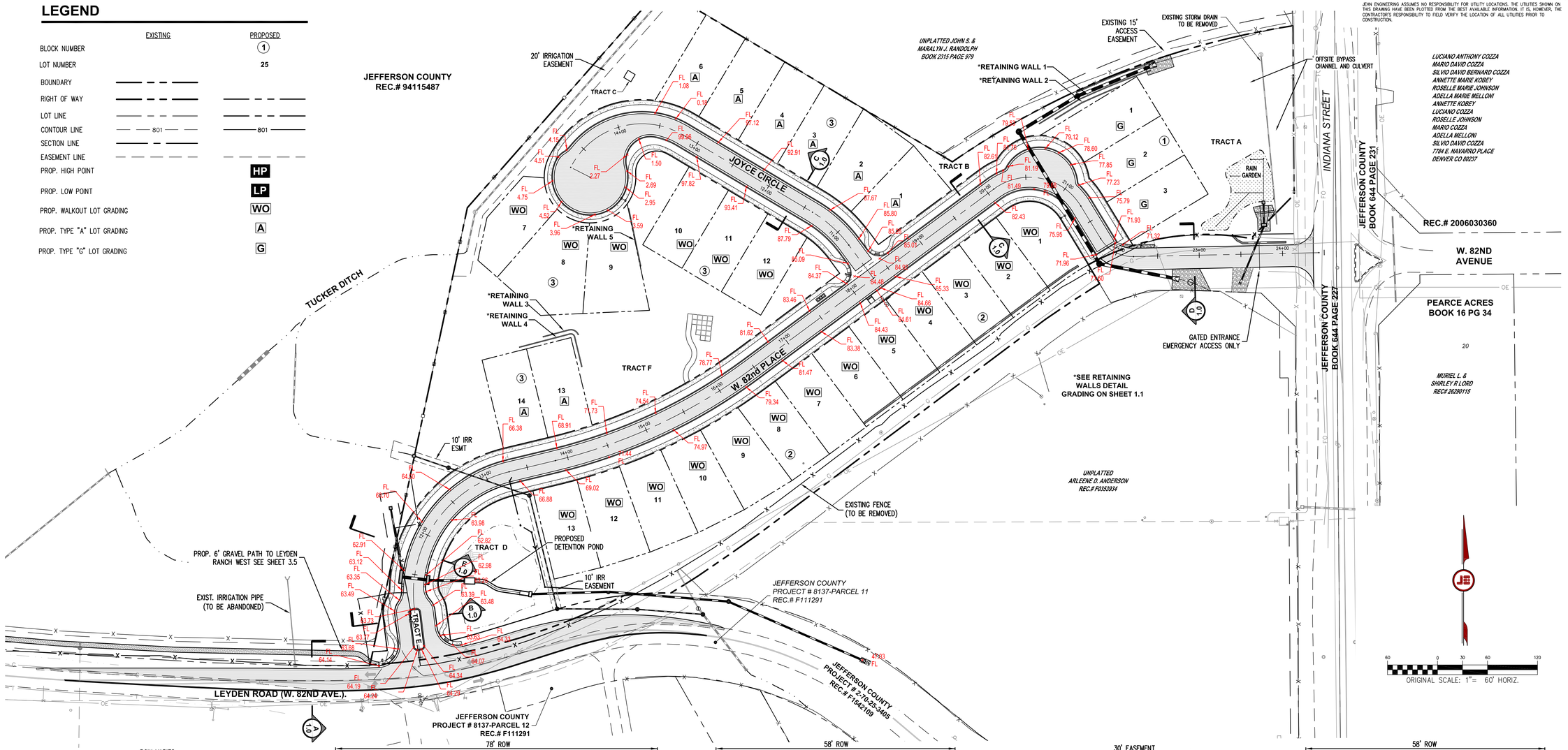
RECORD DRAWING

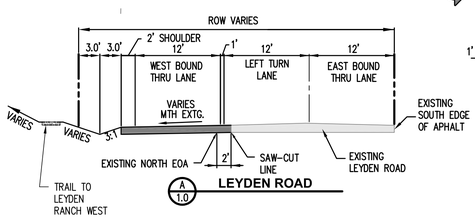
C:\RICK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-COVR.dwg, 7/16/2020 11:00:33 AM

LEGEND

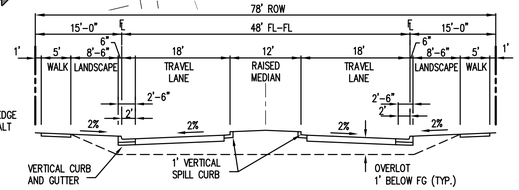
	EXISTING	PROPOSED
BLOCK NUMBER		1
LOT NUMBER		25
BOUNDARY		
RIGHT OF WAY		
LOT LINE		
CONTOUR LINE	801	801
SECTION LINE		
EASEMENT LINE		
PROP. HIGH POINT		HP
PROP. LOW POINT		LP
PROP. WALKOUT LOT GRADING		WO
PROP. TYPE "A" LOT GRADING		A
PROP. TYPE "G" LOT GRADING		G

JOHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

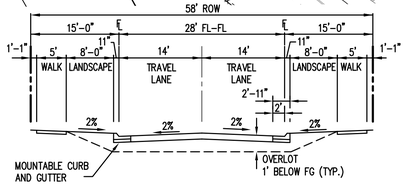




A 1.0 **LEYDEN ROAD**

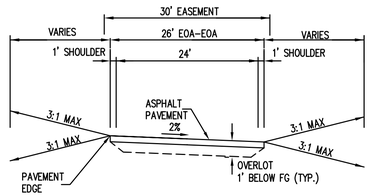


B 1.0 **ENTRANCE ROAD - EAST**
PARCEL

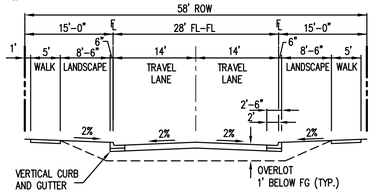


C 1.0 **LOCAL STREET**
MOUNTABLE CURB AND GUTTER

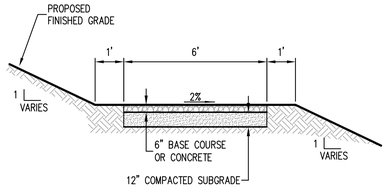
TYPICAL STREET SECTIONS



D 1.0 **EMERGENCY ACCESS ROAD**

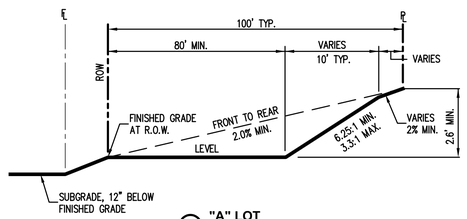


E 1.0 **LOCAL STREET**
VERTICAL CURB AND GUTTER

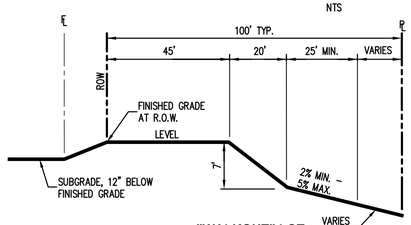


NOTES:
1. 6" BASE COURSE TO BE AASHTO BASE COURSE CLASS 5
2. 12" COMPACTED SUBGRADE.

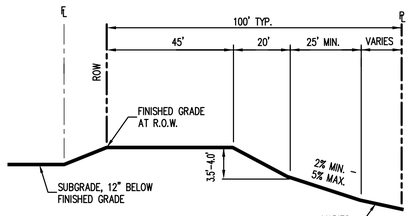
GRAVEL PATH TO LEYDEN RANCH WEST
NTS



A **"A" LOT**



WO **"WALKOUT" LOT**



G **"GARDEN" LOT**

TYPICAL OVERLOT TEMPLATES
NTS

ESTIMATED EARTHWORK

CUT =	34,241 CU YDS
FILL (UNADJUSTED SHRINKAGE) =	45,754 CU YDS
NET	11,513 CU YDS

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

SCALE VERIFICATION
THIS LINE IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

UTILITY NOTIFICATION CENTER
The Utility Notification Center
FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/18/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

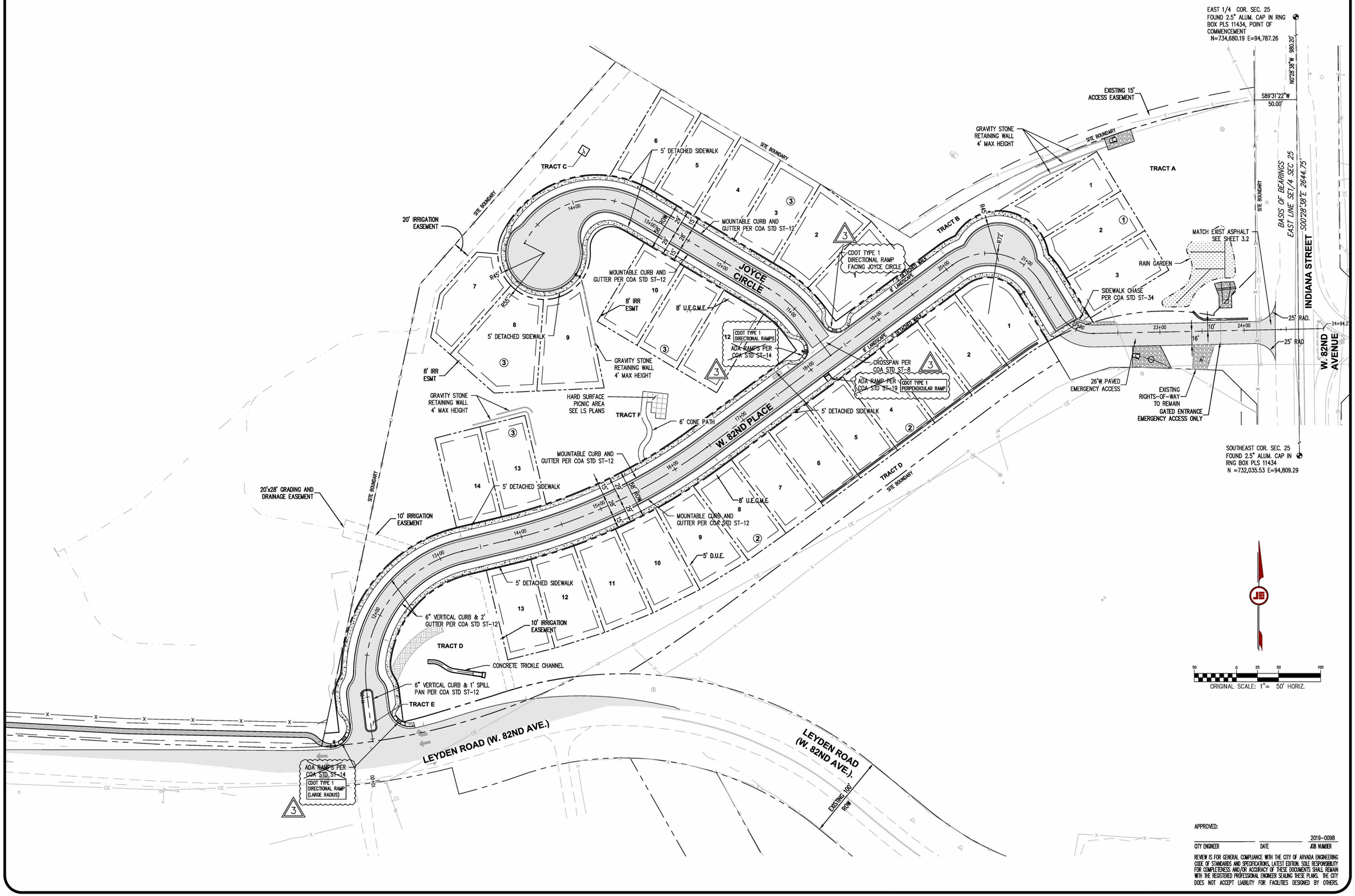
COLORADO REGISTERED JOSEPH A. JOHN 15756 PROFESSIONAL ENGINEER

JOHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN RANCH EAST
OVERALL GRADING PLAN
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
EJ	OKK	311-GR-01.dwg	

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 1.0 OF 30



APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/18/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

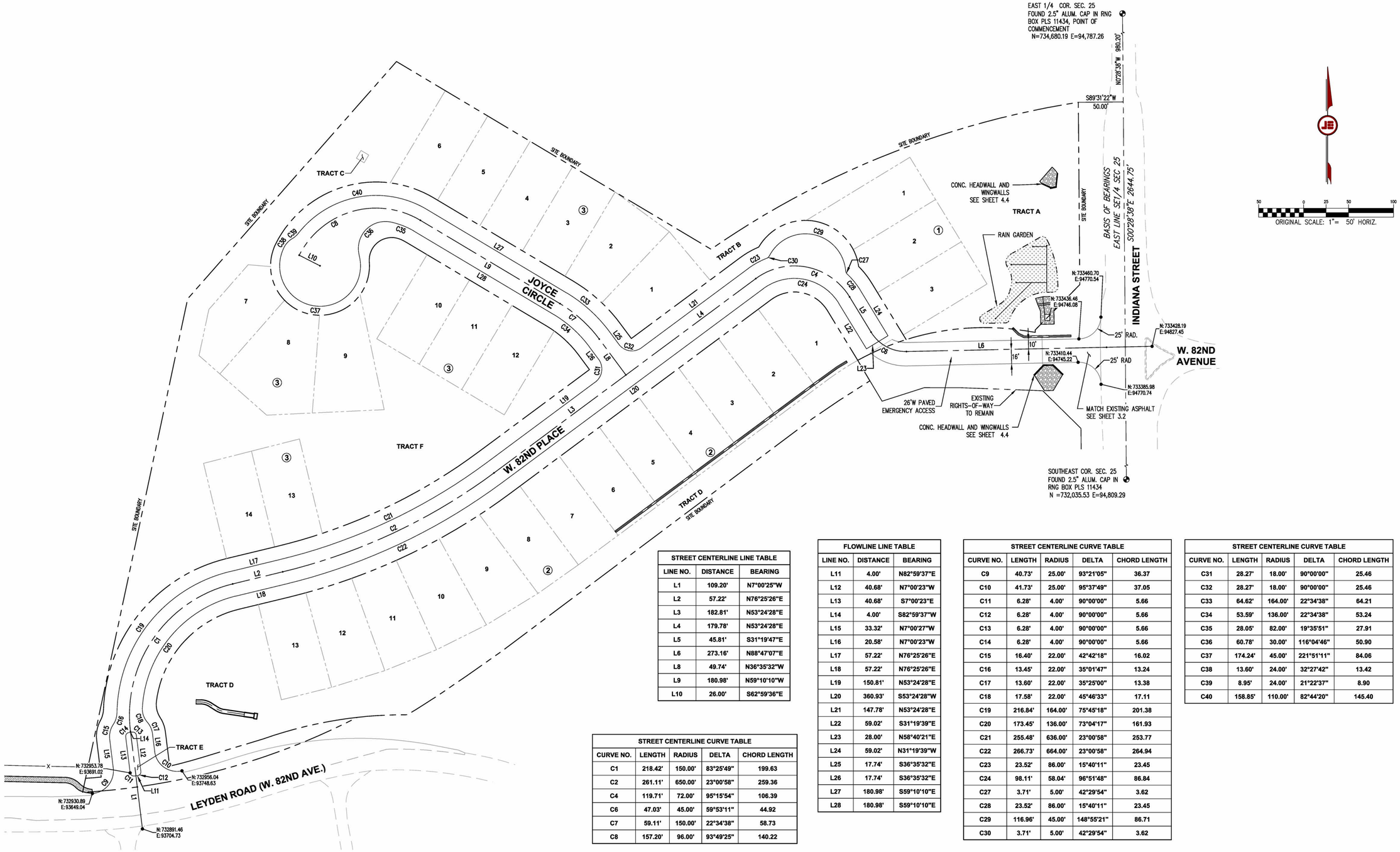
COLORADO LICENSED
JOSEPH A. JEHN
15756
08/04/2021
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-5438

LEYDEN RANCH EAST
SITE PLAN
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111SP.dwg
APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 2.2 OF 30



STREET CENTERLINE LINE TABLE		
LINE NO.	DISTANCE	BEARING
L1	109.20'	N7°00'25"W
L2	57.22'	N76°25'26"E
L3	182.81'	N53°24'28"E
L4	179.78'	N53°24'28"E
L5	45.81'	S31°19'47"E
L6	273.16'	N88°47'07"E
L8	49.74'	N36°35'32"W
L9	180.98'	N59°10'10"W
L10	26.00'	S62°59'36"E

FLOWLINE LINE TABLE		
LINE NO.	DISTANCE	BEARING
L11	4.00'	N82°59'37"E
L12	40.68'	N7°00'23"W
L13	40.68'	S7°00'23"E
L14	4.00'	S82°59'37"W
L15	33.32'	N7°00'27"W
L16	20.58'	N7°00'23"W
L17	57.22'	N76°25'26"E
L18	57.22'	N76°25'26"E
L19	150.81'	N53°24'28"E
L20	360.93'	S53°24'28"W
L21	147.78'	N53°24'28"E
L22	59.02'	S31°19'39"E
L23	28.00'	N58°40'21"E
L24	59.02'	N31°19'39"W
L25	17.74'	S36°35'32"E
L26	17.74'	S36°35'32"E
L27	180.98'	S59°10'10"E
L28	180.98'	S59°10'10"E

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C1	218.42'	150.00'	83°25'49"	199.63
C2	261.11'	650.00'	23°00'58"	259.36
C4	119.71'	72.00'	95°15'54"	106.39
C6	47.03'	45.00'	59°53'11"	44.92
C7	59.11'	150.00'	22°34'38"	58.73
C8	157.20'	96.00'	93°49'25"	140.22

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C9	40.73'	25.00'	93°21'05"	36.37
C10	41.73'	25.00'	95°37'49"	37.05
C11	6.28'	4.00'	90°00'00"	5.66
C12	6.28'	4.00'	90°00'00"	5.66
C13	6.28'	4.00'	90°00'00"	5.66
C14	6.28'	4.00'	90°00'00"	5.66
C15	16.40'	22.00'	42°42'18"	16.02
C16	13.45'	22.00'	35°01'47"	13.24
C17	13.60'	22.00'	35°25'00"	13.38
C18	17.58'	22.00'	45°46'33"	17.11
C19	216.84'	164.00'	75°45'18"	201.38
C20	173.45'	136.00'	73°04'17"	161.93
C21	255.48'	636.00'	23°00'58"	253.77
C22	266.73'	664.00'	23°00'58"	264.94
C23	23.52'	86.00'	15°40'11"	23.45
C24	98.11'	58.04'	96°51'48"	86.84
C27	3.71'	5.00'	42°29'54"	3.62
C28	23.52'	86.00'	15°40'11"	23.45
C29	116.96'	45.00'	148°55'21"	86.71
C30	3.71'	5.00'	42°29'54"	3.62

STREET CENTERLINE CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C31	28.27'	18.00'	90°00'00"	25.46
C32	28.27'	18.00'	90°00'00"	25.46
C33	64.62'	164.00'	22°34'38"	64.21
C34	53.59'	136.00'	22°34'38"	53.24
C35	28.05'	82.00'	19°35'51"	27.91
C36	60.78'	30.00'	116°04'46"	50.90
C37	174.24'	45.00'	221°51'11"	84.06
C38	13.60'	24.00'	32°27'42"	13.42
C39	8.95'	24.00'	21°22'37"	8.90
C40	158.85'	110.00'	82°44'20"	145.40

APPROVED:

Jenny Wolfenbarger PE. 7/23/20 3363

CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

C:\ECKS\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-HORZ_CTRL.dwg, 7/16/2020 11:02:59 AM

ILLINOIS LOCATION CENTER
The811.Promise.com
FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

SCALE: ERRATA ICATION
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RESEARCH DOCUMENTS

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REVISIONS			
NO	DESCRIPTION	DATE	BY
1	REVISED PER CITY COMMENTS	3/4/15	BWV
2	REVISED PER CITY COMMENTS	4/29/15	MB
3	REVISED PER CITY COMMENTS	11/4/19	AHN
4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

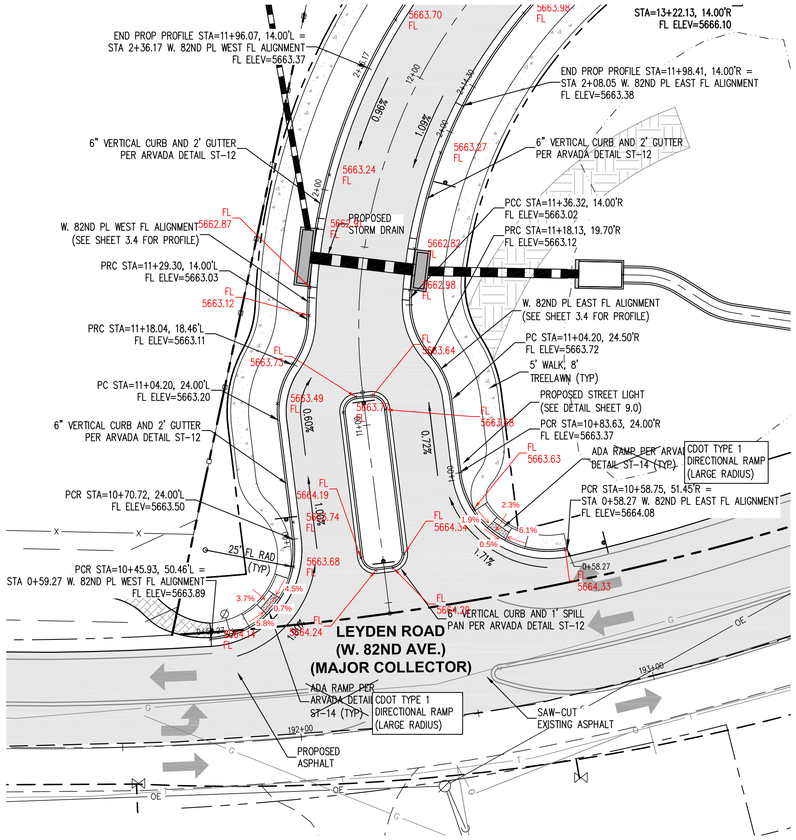
COLORADO REGISTERED JOSEPH A. HEHN 15756 PROFESSIONAL ENGINEER

JEHN ENGINEERING
8600 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-8038 FAX (303) 467-8438

LEYDEN RANCH EAST
HORIZONTAL CONTROL PLAN
prepared for
LEYDEN RANCH ES, LLC.

DRAWN BY: E
DESIGNED BY: O
DRAWING NAME: 3111-HORZ-CTRL.dwg
APPROVED BY:

JOB NUMBER: 201 -21 -111
DATE: 0 2020
SCALE: 1" 50
SHEET NO: 2. O 0



ENTRANCE DETAIL

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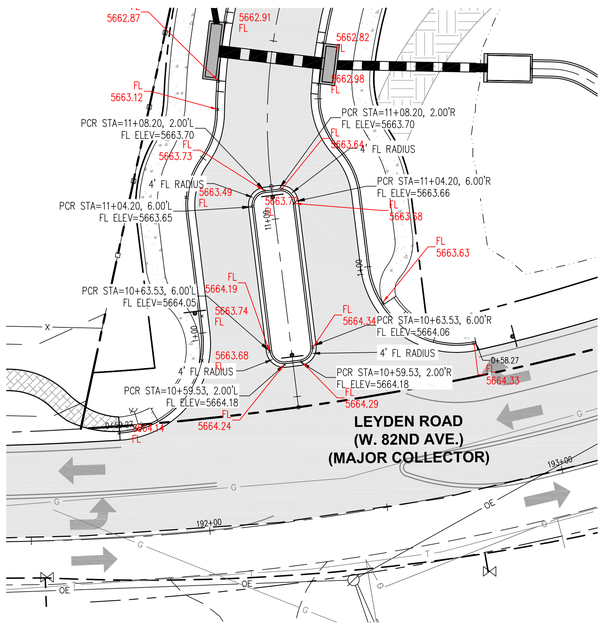

MEDIAN DETAIL

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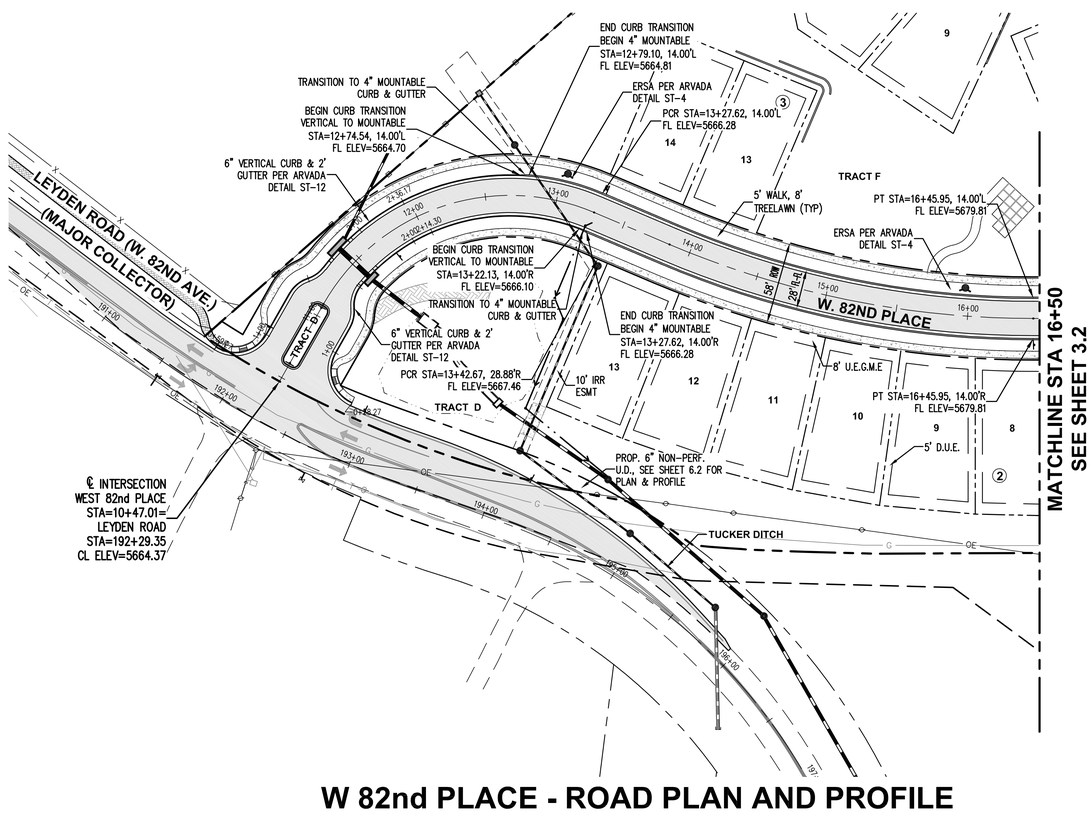
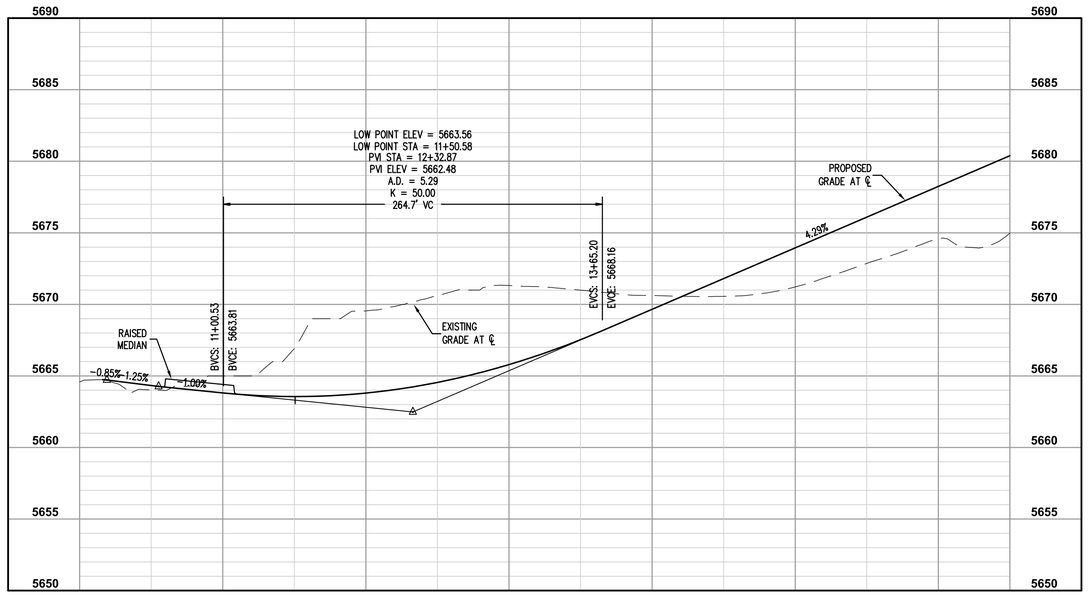
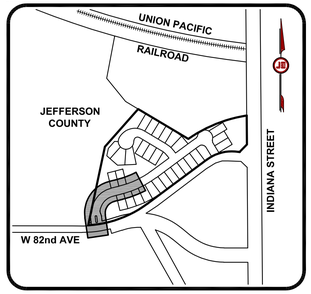


W 82nd PLACE - ROAD PLAN AND PROFILE

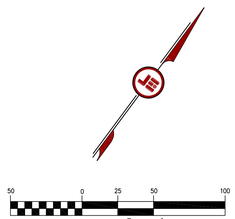


JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP

SCALE 1"=500'



ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE HORIZONTAL CONTROL PLAN FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

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FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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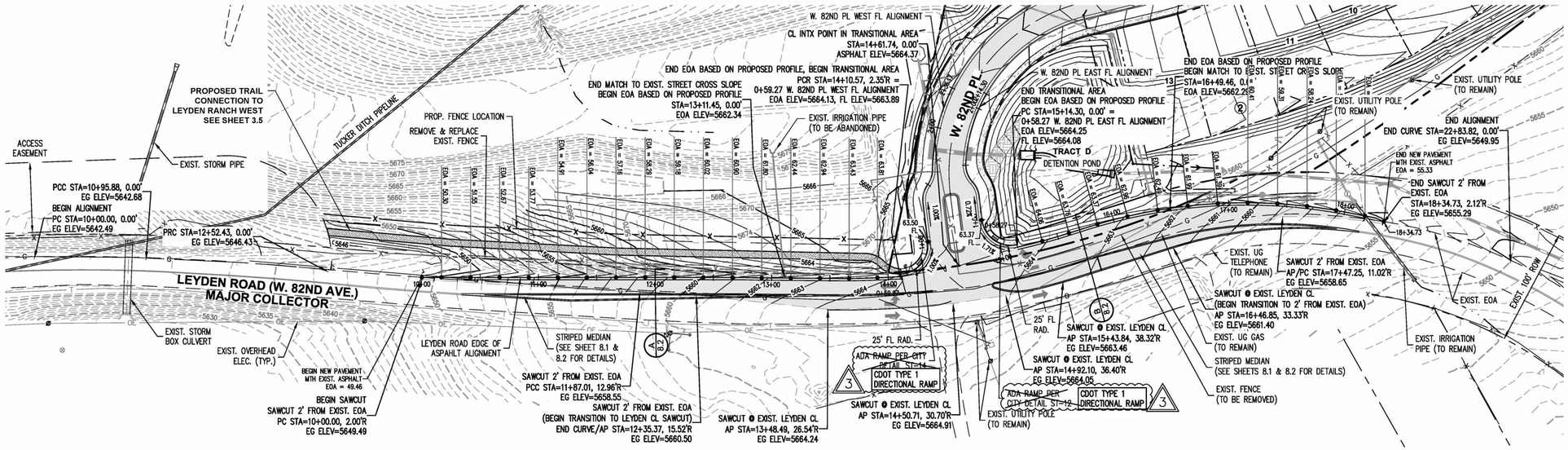
JEHN ENGINEERING
3680 WEBSTER STREET
DENVER, COLORADO 80211
PH: (303) 433-8038 FAX: (303) 467-9438

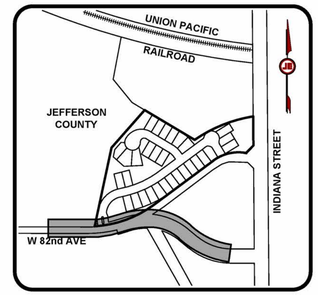
LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
WEST 82ND PLACE

prepared for:
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-82nd-PL.dwg
APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 3.1 OF 30

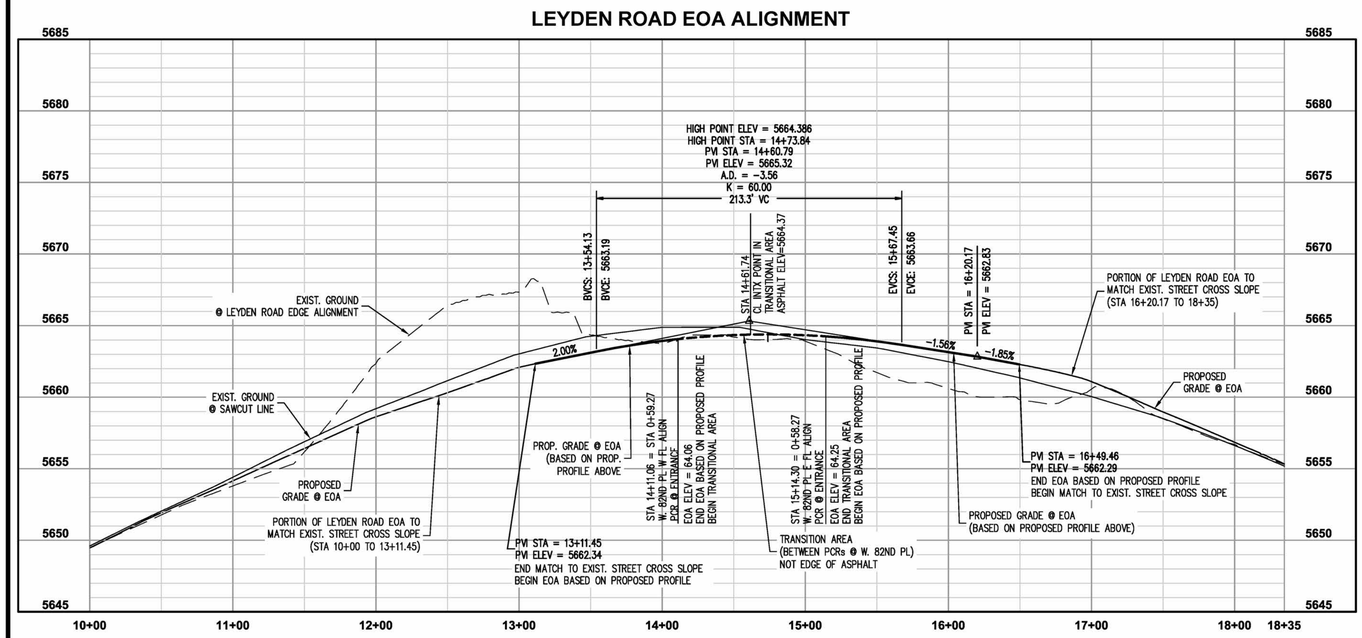




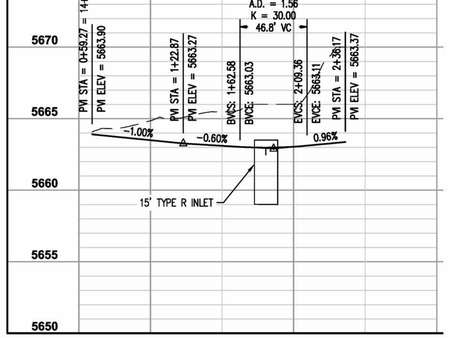
KEYMAP

SCALE 1"=500'

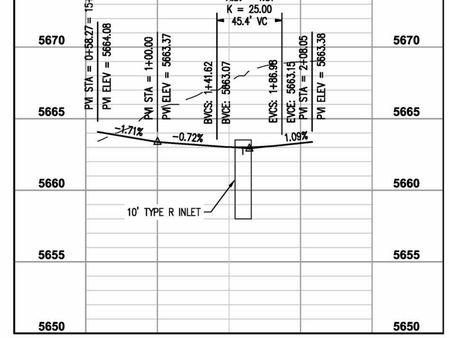
LEYDEN ROAD EOA ALIGNMENT



W. 82ND PL WEST FL ALIGNMENT

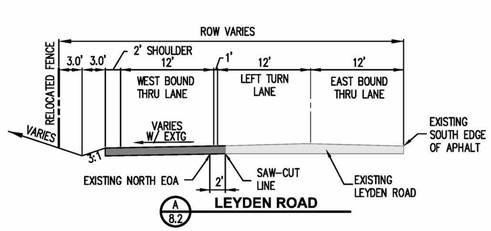


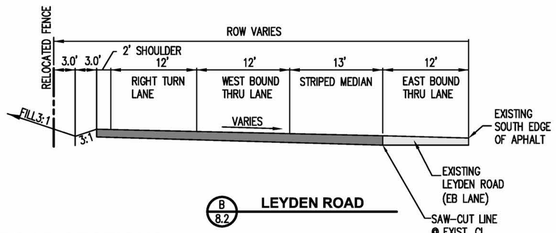
W. 82ND PL EAST FL ALIGNMENT

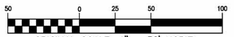


TYPICAL LEYDEN ROAD SECTIONS

NTS







ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

SCALE VERIFICATION BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

UTILITY NOTIFICATION CENTER The811.Promise.com FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

REUSE OF DOCUMENT
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NO	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/18/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

REVISIONS

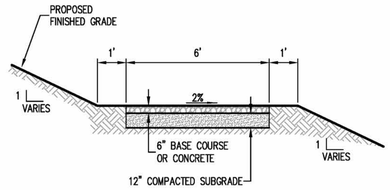
COLORADO LICENSED — JOSEPH A. JEHN — 15756 — PROFESSIONAL ENGINEER — 08/04/2021

JEHN ENGINEERING
5660 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-8438

LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
LEYDEN ROAD IMPROVEMENTS
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-LEYDEN-RD.dwg
APPROVED BY:
JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 3.4 OF 30

C:\RICK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-LEYDEN-RD.dwg, 8/4/2021 8:27:24 AM

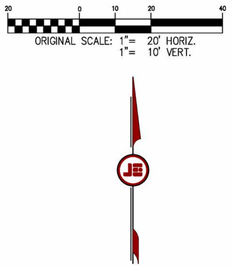


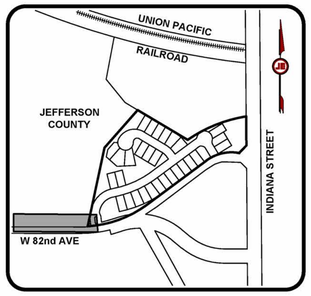
NOTES:

1. 6" BASE COURSE TO BE AASHTO BASE COURSE CLASS 5
2. 12" COMPACTED SUBGRADE.

TYPICAL SOFT TRAIL SECTION

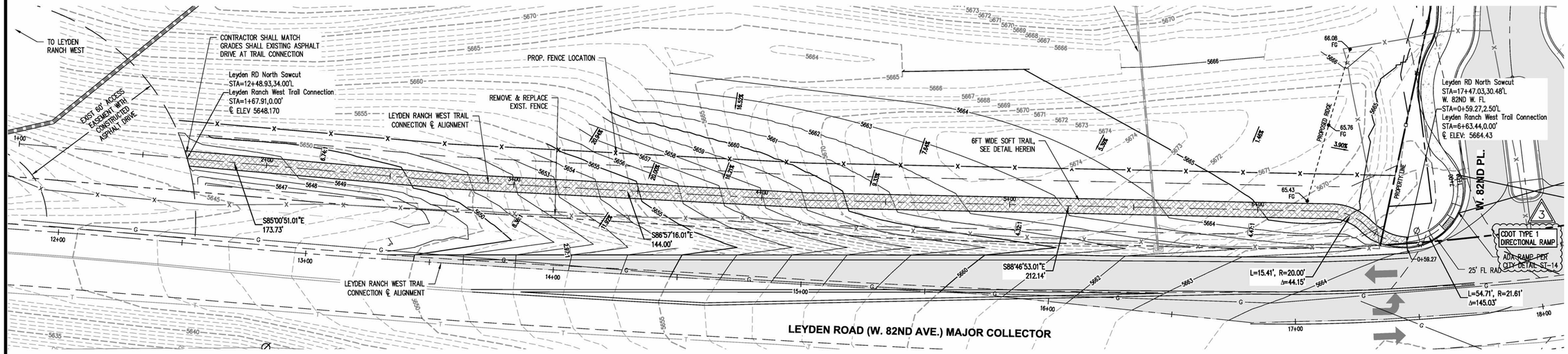
NTS



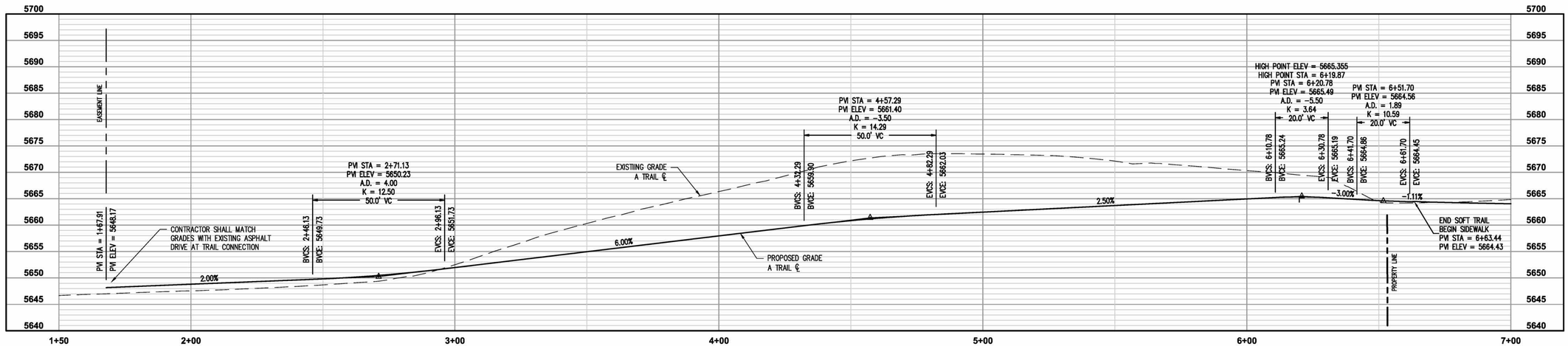


KEYMAP

SCALE 1"=500'



TRAIL CONNECTION TO LEYDEN RANCH EAST PLAN AND PROFILE



APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWING

UTILITY NOTIFICATION CENTER — The811.Promise.com

SCALE VERIFICATION
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IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

REUSE OF DOCUMENT
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NO	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	5/16/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

COLORADO LICENSED — JOSEPH A. HUNT — 15756 — 08/04/2021 — PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-8438

LEYDEN RANCH EAST
ROAD PLAN AND PROFILE
WEST LEYDEN TRAIL CONNECTION

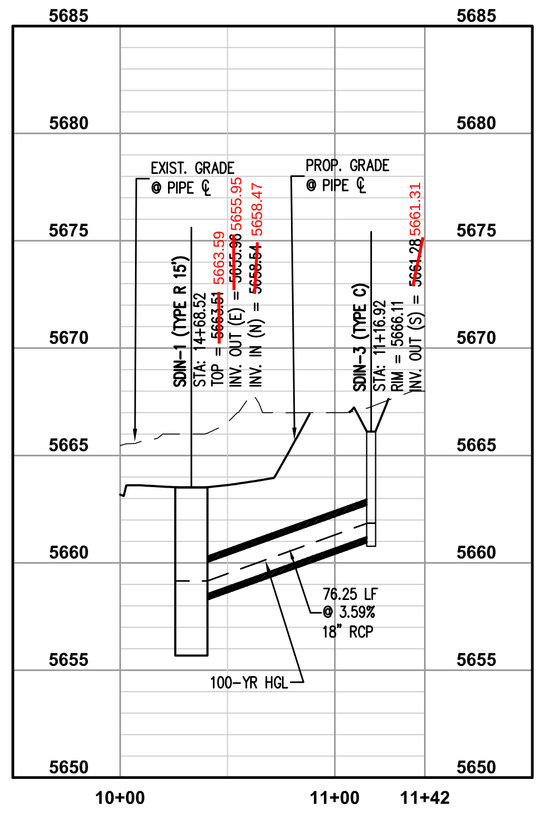
prepared for
LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ
DESIGNED BY: OKK
DRAWING NAME: 3111-LEYDENRD_Trail.dwg
APPROVED BY:

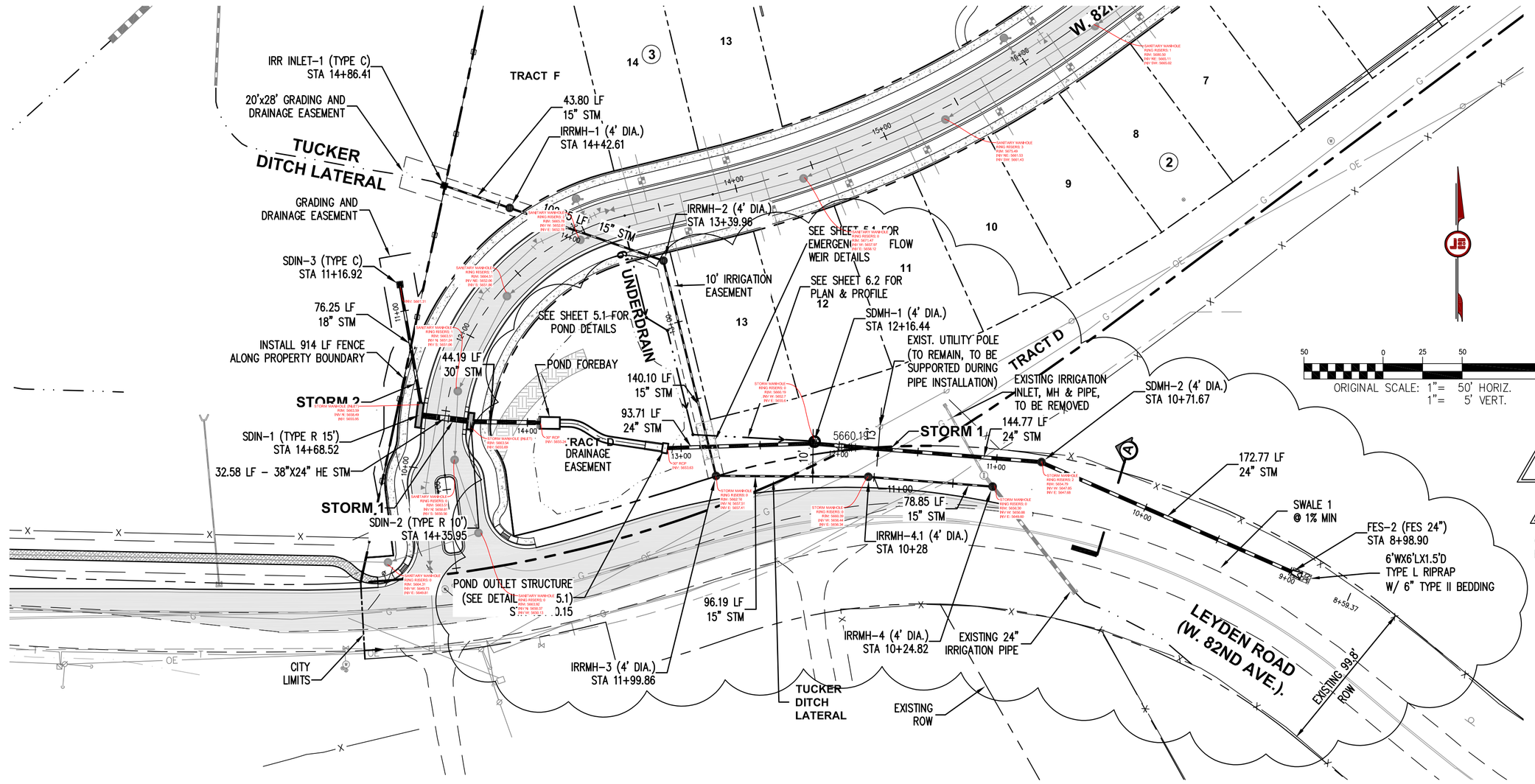
JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 20'
SHEET NO: 3.5 OF 30

C:\RICK\Projects\D_ARV_JOB\16\213-111\CIVIL\CONSTRUCTION\3111-LEYDEN-RD_Trail.dwg, 8/4/2021 8:27:40 AM

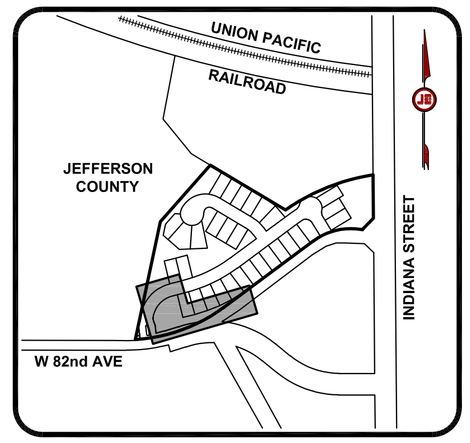
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



STORM 2 DRAIN PROFILE

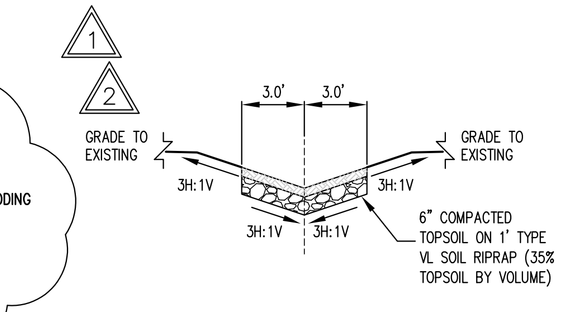


STORM AND TUCKER DITCH - PLAN & PROFILE



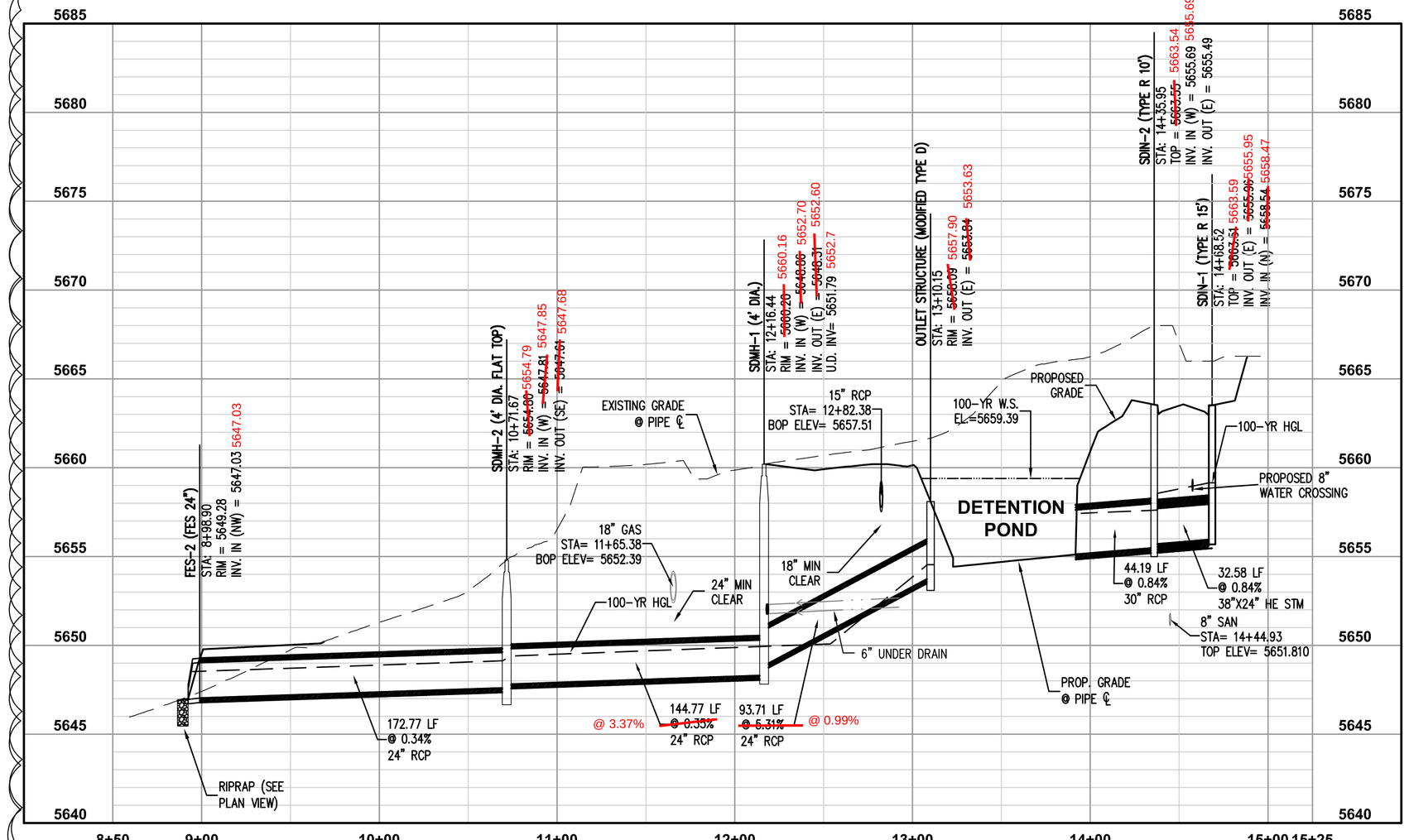
KEYMAP

SCALE 1"=500'

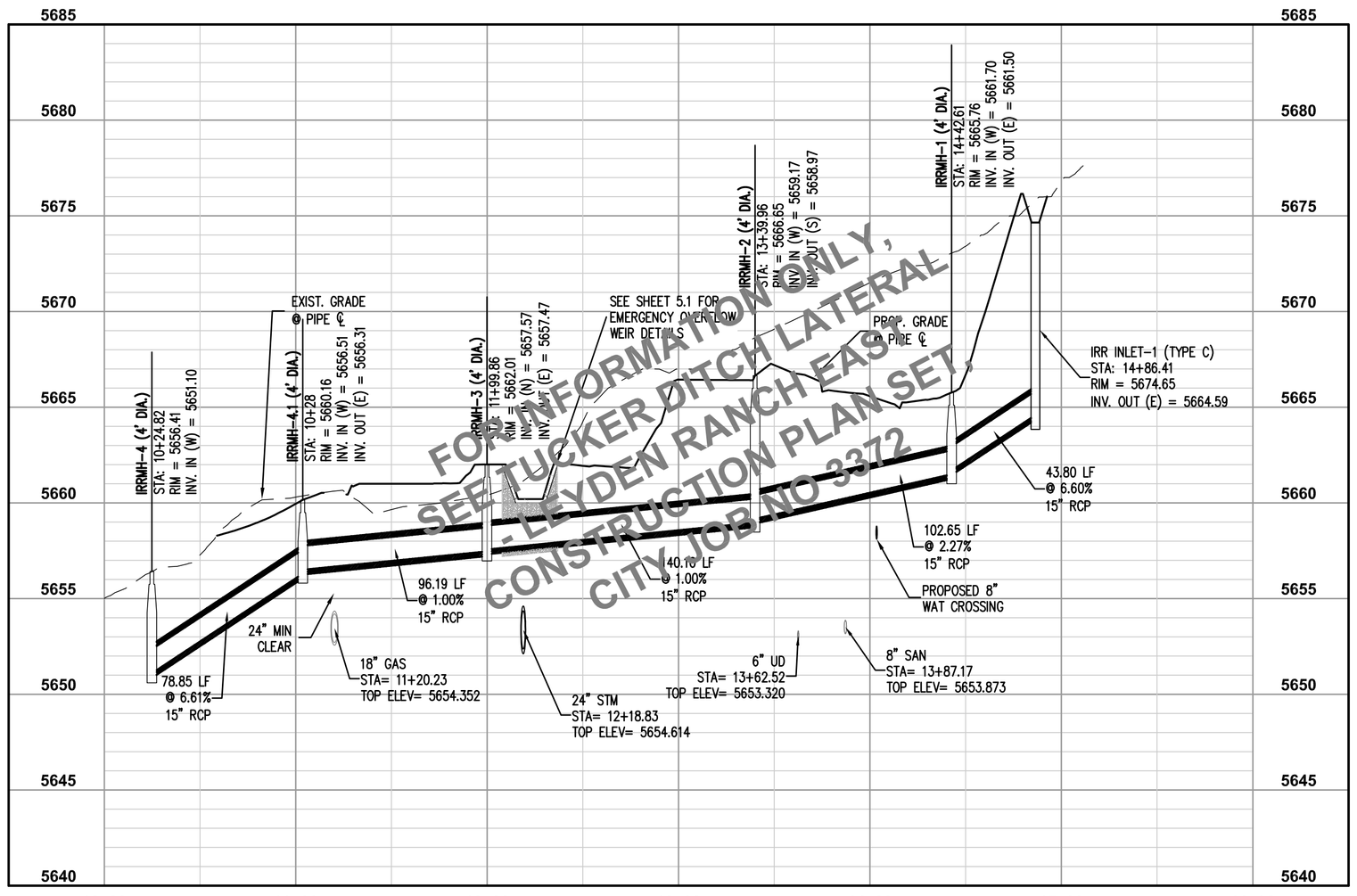


SECTION A-A

SWALE 1 TYPICAL SECTION



STORM 1 DRAIN PROFILE



FOR INFORMATIONAL ONLY, SEE TUCKER DITCH LATERAL - LEYDEN RANCH EAST CONSTRUCTION PLAN SET CITY JOB NO 3372

TUCKER DITCH PROFILE

RECORD DRAWING

APPROVED:

CITY ENGINEER — DATE — 2019-0098 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	3/23/21	KEC
2	UTILITY REVISION DUE TO POWER POLE CONFLICTS	6/10/21	KEC
3	NORTHEAST STORM REDESIGN & ADA RFI	8/4/21	KEC

REVISIONS

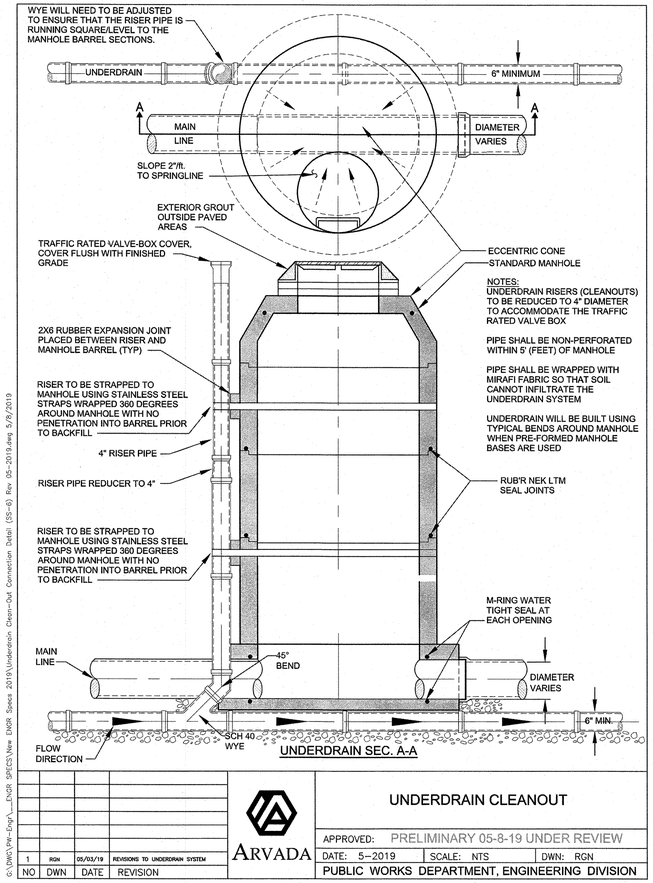
JEHN ENGINEERING
3600 WEBSTER STREET
DENVER, CO 80211
PH: (303) 422-8636 FAX: (303) 457-0438

LEYDEN RANCH EAST
STORM DRAIN AND IRRIGATION DRAIN - PLAN & PROFILE

prepared for: LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ | DESIGNED BY: OKK | DRAWING NAME: 311-STM-01.dwg | APPROVED BY:

JOB NUMBER: 2016-213-111
DATE: 05/18/2021
SCALE: 1" = 50'
SHEET NO: 4.1 OF 30



NO	DWN	DATE	REVISION
1	RGN	05/03/19	REVISIONS TO UNDERDRAIN SYSTEM

ARVADA

UNDERDRAIN CLEANOUT

APPROVED: PRELIMINARY 05-8-19 UNDER REVIEW

DATE: 5-2019 | SCALE: NTS | DWN: RGN

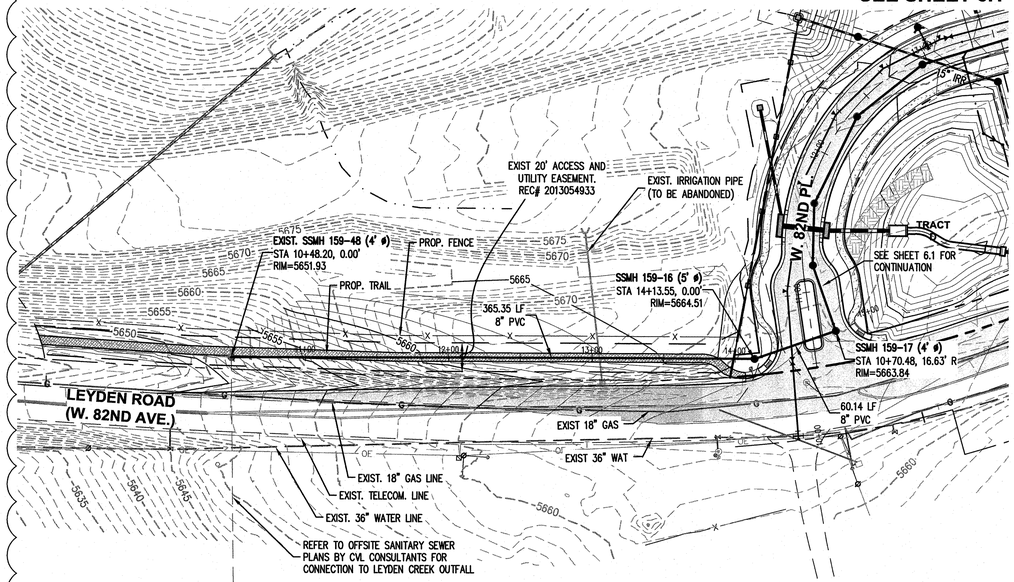
PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

SS-6

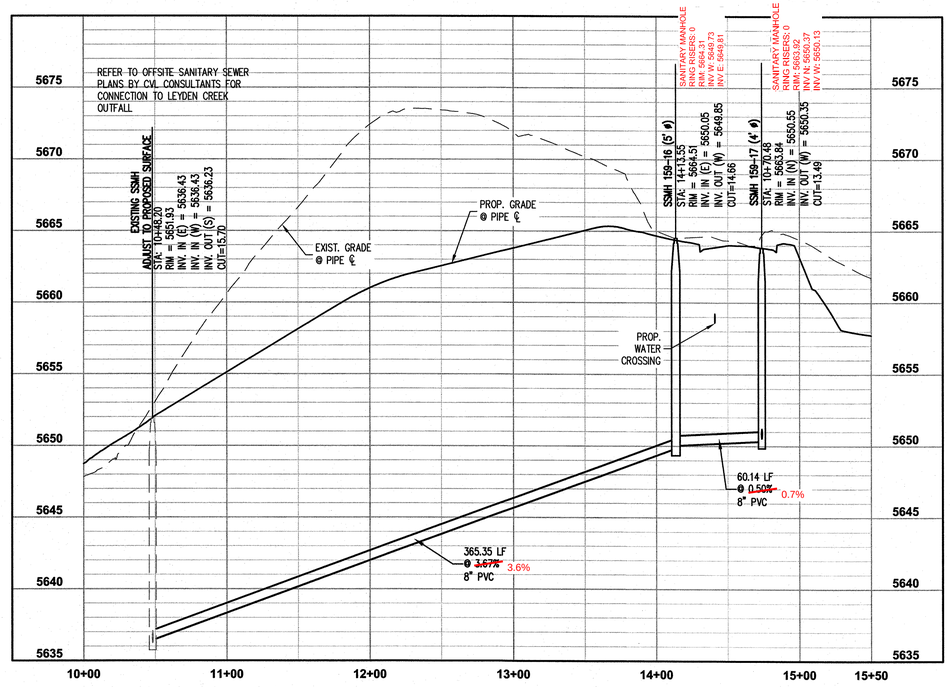
C:\DWG\Pw-Engr\...ENGR SPECS\New ENGR Specs 2019\Underdrain Clean-Out Connection Detail (SS-6) Rev 05-2019.dwg 5/8/2019

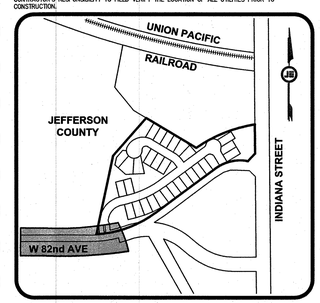
C:\KCK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-LEYDEN-RD-SAN.dwg, 2/18/2021 10:46:25 AM

SEE SHEET 6.1



W 82nd PLACE SANITARY SEWER - PLAN AND PROFILE





KEYMAP

SCALE 1"=500'

50 0 25 50 100

ORIGINAL SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

1

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS OTHERWISE NOTED.
2. ALL SANITARY SEWER SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED:

CITY ENGINEER | DATE | 2019-0098 JOB NUMBER

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REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	UTILITY REVISION DUE TO EXIST UTIL CONFLICTS	2/18/21	KEC

COLORADO REGISTERED JOSEPH A. JEHN 15756 PROFESSIONAL ENGINEER

JEHN ENGINEERING

3880 WEBSTER STREET ARVADA, CO 80002 PH: (303) 422-8336 FAX: (303) 467-8438

LEYDEN RANCH EAST

LEYDEN ROAD

prepared for LEYDEN PROPERTIES, LLC.

DRAWN BY: EJ | DESIGNED BY: OKK | DRAWING NAME: 3111-LEYDEN-RD-SAN.dwg | APPROVED BY:

JOB NUMBER: 2016-213-111

DATE: 04/9/2020

SCALE: 1" = 50'

SHEET NO: 6.3 OF 30

RECORD DRAWING

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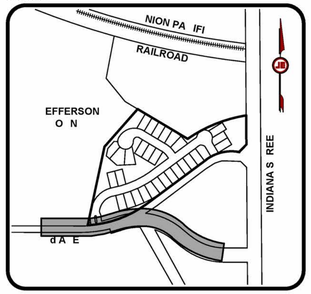
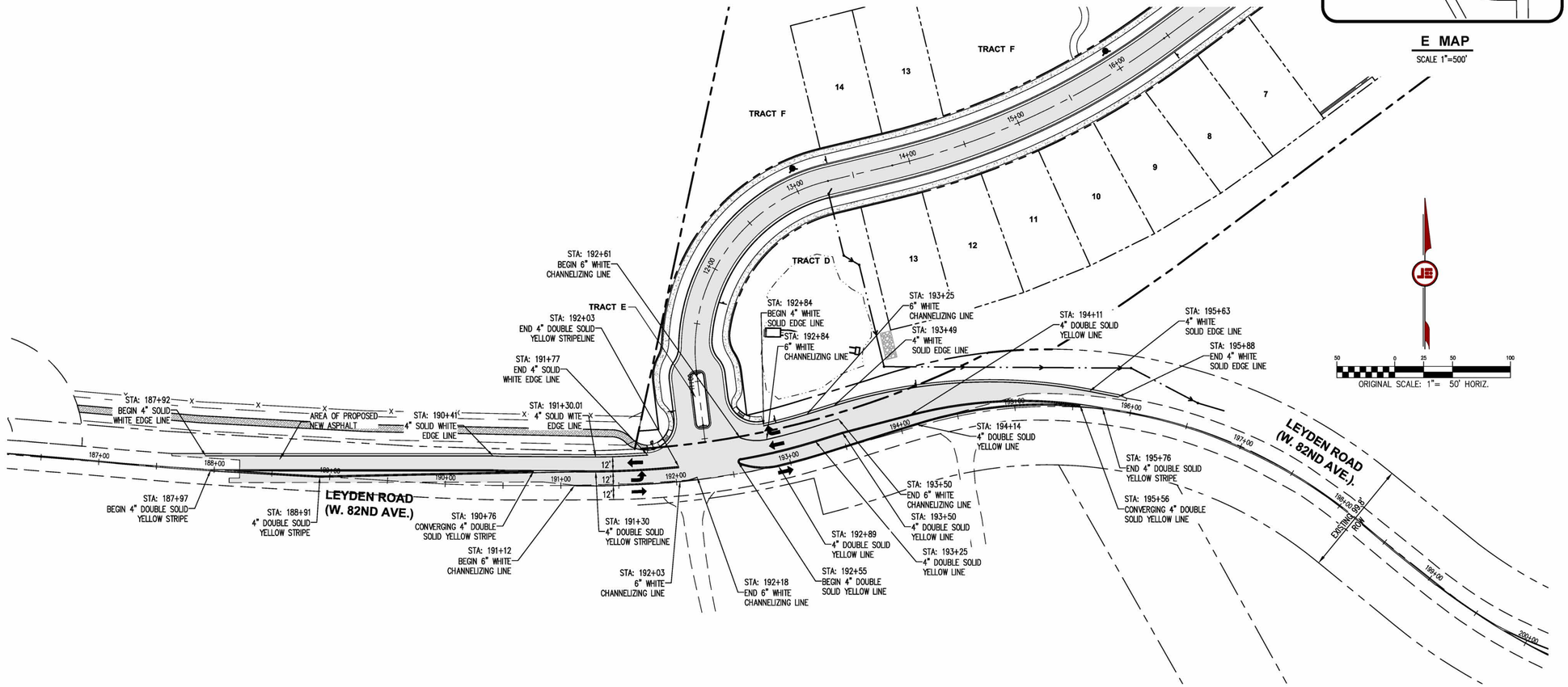


E MAP
SCALE 1"=500'



NO ES

1. POSTED SPEED LIMIT IS 40 MPH FOR W. 82ND AVENUE.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-3M TAPE, INLAID WITH OVERLAY.
4. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE WATER BASED PAINT. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
5. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA AND JEFFERSON COUNTY WHEN INSTALLING THE NEW STRIPING ON LEYDEN ROAD (W. 82ND AVE).
6. SEE SHEET 8.1 FOR LEYDEN ROAD (W. 82ND AVE.) SIGNAGE.

APPROVED:

Jenny Wolfinbarger P.E.	7/23/20	3363	
CITY ENGINEER	DATE	JOB NUMBER	

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RECORD DRAWING

C:\BECK\Projects\D_ARV_J\2016\213-111\CIVIL\CONSTRUCTION\3111-TM-02.dwg, 7/16/2020 11:09:30 AM

NO	DESCRIPTION	DATE	BY
1	REVISED PER CITY COMMENTS	3/4/15	BWV
2	REVISED PER CITY COMMENTS	4/29/15	MB
3	REVISED PER CITY COMMENTS	11/6/19	AHN
4	REVISED PER CITY COMMENTS	1/20/20	AHN
5	FOR APPROVAL	7/15/20	AHN

ILLUSTRATION CENTER
The811.Promise.com
FOR MARKING OF UNDERGROUND MEMBER UTILITIES.

SCALE: ERIFICATION
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IF NOT ONE INCH ON THIS SHEET
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COLORADO REGISTERED
JOSEPH A. NAHAS
15756
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8008 FAX: (303) 467-8408

LEYDEN RANCH EAST
LE DEN ROAD W 82ND
S RI IN LAN

prepared for
LE DEN RO ER IES, LLC.

DRAWN BY: E
DESIGNED BY: O
DRAWING NAME: 3111-TM-02.dwg
APPROVED BY:

JOB NUMBER: 201 -21 -111
DATE: 0 2020
SCALE: 1" 50
SHEET NO: 8.2 O 0

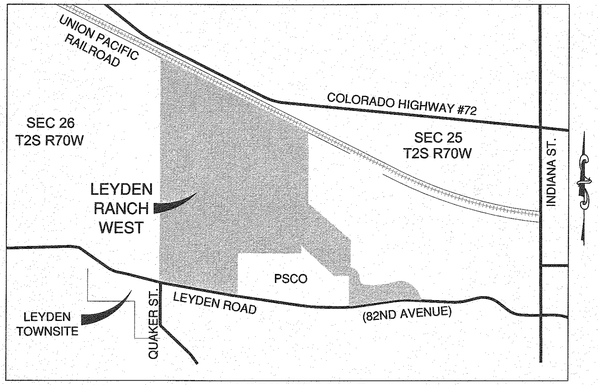
CONSTRUCTION PLANS

FOR

LEYDEN RANCH WEST SUBDIVISION

JEFFERSON COUNTY, CO

AS-BUILT



VICINITY MAP

SCALE 1" = 1000'

General Notes

A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION, UNLESS OTHERWISE SPECIFIED HEREIN.

B. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE LICENSED WITH THE CITY OF ARVADA ENGINEERING DIVISION.

C. ALL WORK WILL REQUIRE A CITY OF ARVADA ENGINEERING DIVISION PUBLIC IMPROVEMENT PERMIT PRIOR TO THE START OF CONSTRUCTION. ALL CONTRACTORS AND SUBCONTRACTORS MUST OBTAIN A SEPARATE PERMIT FOR THE WORK BEING COMPLETED BY THE PARTICULAR CONTRACTOR OR SUBCONTRACTOR. ANY CONSTRUCTION WITHIN THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) RIGHT-OF-WAY WILL REQUIRE A CDOT CONSTRUCTION PERMIT PRIOR TO ANY WORK IN THEIR RIGHT-OF-WAY.

D. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED DRAWINGS SIGNED BY THE CITY ENGINEER AND A PRINTED COPY OF THE CURRENT CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" ON SITE AT ALL TIMES.

E. THE CITY OF ARVADA ENGINEERING DIVISION SHALL BE NOTIFIED (PHONE # 720-898-7640) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

F. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.

G. THE CONTRACTOR IS RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY.

H. BENCHMARK LOCATION, ELEVATION AND DATUM ARE AS NOTED.

I. AS-BUILT DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD. UTILITY AS-BUILTS SHALL INCLUDE STATIONING OF ALL FITTINGS, SERVICES AND PERTINENT ELEVATIONS. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THE AS-BUILTS HAVE BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

J. A CITY OF ARVADA TAX CERTIFICATION FORM MUST BE COMPLETED BY ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT. THIS FORM DETAILS ALL MATERIALS WHICH HAVE BEEN INCLUDED IN THE WORK BY CONTRACTORS AND SUBCONTRACTORS. COPIES OF ALL PAID INVOICES FOR MATERIALS SHALL BE ATTACHED TO THE FORM. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THIS FORM HAS BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

K. OWNER/DEVELOPER SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A SITE OF ONE (1) ACRE OR MORE OR LESS THAN ONE ACRE AND PART OF A LAYER DEVELOPMENT. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF CLEARING, GRADING OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

L. CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR ALL AREAS WHERE DEWATERING IS REQUIRED FROM AN EXCAVATION AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

M. ALL CURB RAMPS SHALL COMPLY WITH THE LATEST CITY OF ARVADA AND ADA STANDARD. CONTRACTOR TO CHECK WITH THE CITY OF ARVADA ENGINEERING DIVISION TO VERIFY THE LATEST CURB RAMP STANDARD PRIOR TO CONSTRUCTION OF ANY RAMP.

N. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF ARVADA ENGINEERING DIVISION. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

O. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF ARVADA TRAFFIC ENGINEERING DIVISION FOR ACCEPTANCE WITH THE PUBLIC IMPROVEMENTS PERMIT APPLICATION. A PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL ON EXISTING ROADS DURING CONSTRUCTION.

95.7.2 STREET

A. CONTRACTOR SHALL HAVE ON SITE A COPY OF THE CITY OF ARVADA APPROVED SUBGRADE SOILS AND PAVEMENT DESIGN REPORT SHOWING MINIMUM REQUIRED SUBGRADE PREPARATION REQUIREMENTS AND MINIMUM REQUIRED PAVEMENT THICKNESSES.

B. ALL TRENCH BACKFILL AND SUBGRADE PREPARATION SHALL BE TESTED TO ENSURE COMPLIANCE WITH CITY OF ARVADA STANDARDS AND SHALL BE TESTED AT CITY REQUIRED FREQUENCIES BY A CITY APPROVED PRIVATE SOILS TESTING FIRM. TEST RESULTS SHALL BE SUBMITTED TO, REVIEWED, AND APPROVED BY, THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING BASE COURSE, ASPHALT OR CONCRETE ON PREPARED SUBGRADE. ALL BASE COURSE DENSITY SHALL ALSO BE TESTED BY THE PRIVATE SOILS FIRM AT CITY REQUIRED FREQUENCIES TO ENSURE COMPLIANCE WITH CITY OF ARVADA REQUIREMENTS. BASE COURSE TEST RESULTS SHALL ALSO BE APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING PAVEMENT. ALL CONCRETE AND ASPHALT PLACED SHALL BE TESTED IN ACCORDANCE WITH CITY OF ARVADA MINIMUM MATERIALS TESTING STANDARDS.TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD.

C. THE SUBGRADE MATERIAL SHALL BE REMOVED TO A DEPTH REQUIRED BY THE CITY OF ARVADA ACCORDING TO INFORMATION OBTAINED FROM LABORATORY TESTS AND/OR AS REQUIRED IN THE PAVEMENT DESIGN REPORT. ADDITIVES OR APPROVED MATERIAL MAY BE REQUIRED IF THE NATIVE MATERIAL IS UNSATISFACTORY. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY DETERMINED IN ACCORDANCE WITH AASHTO DESIGNATION T180 OR T99 AND IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS SECTION 203.07.

D. THE CONTRACTOR SHALL PROOF ROLL ALL SUBGRADE AND BASE COURSE IN A MANNER ACCEPTABLE TO THE CITY OF ARVADA IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". PROOF ROLLING SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO INSTALLATION OF PAVEMENT AND/OR CONCRETE FLATWORK.

E. ALL CONCRETE CURB, GUTTER, SIDEWALK AND OTHER FLATWORK WITHIN THE CITY RIGHT OF WAY SHALL BE MINIMUM 6" THICKNESS. CROSSPANS SHALL BE MINIMUM 8" THICKNESS AND MINIMUM 8 FOOT WIDTH. ALL CONCRETE SHALL BE MINIMUM 4000 PSI DESIGN STRENGTH REINFORCED WITH 1.5 LBS/CY FIBERMESH IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

95.7.3 IRRIGATION

A. CONTRACTOR IS TO NOTIFY AFFECTED IRRIGATION COMPANY A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION IN IRRIGATION EASEMENTS OR ON IRRIGATION DITCHES.

B. ALL IRRIGATION PIPE JOINTS SHALL BE WATERTIGHT AND PASS A LOW AIR PRESSURE TEST.

95.7.4 UTILITIES

A. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 24 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.

B. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER T & D DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.

C. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.

D. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.

E. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.

F. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

G. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.

H. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.

I. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION BY CALLING 720-898-7800.

CITY OF ARVADA STANDARD DETAILS

Surface Drainage
SD-1
SD-2
SD-3
SD-4
SD-5
SD-6
SD-7
SD-8
SD-9
SD-10
SD14
SD-18
SD-19
SD-21
SD-22

STORM WATER
SW-1
SW-3
SW-4
SW-5
SW-6
SW-7
SW-8
SW-8a
SW-9
SW-9a
SW-10
SW-11

TRAFFIC
TR-1
TR-9

WATER
W-1
W-3
W-4
W-6
W-7
W-8
W-9
W-10
W-11
W-12
W-13
W-14
W-15
W-16
W-17
W-18
W-19
W-20
W-21
W-22

WATER
W-30
W-47
W-48
W-49
W-50
W-51
W-52
W-54
W-55
W-56
W-57
W-58
W-59
W-65

STREETS
ST-4
ST-10
ST-11
ST-12
ST-17

WATER METERS
W-31
W-32
W-33
W-34
W-35
W-36
W-37
W-44
W-45

SANITARY
SS-1
SS-2
SS-3
SS-4
SS-5
SS-7
SS-13

AB = AS-BUILT SHEETS INCLUDED IN THIS SET

SHEET INDEX

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1.0	OVERALL OVERLOT GRADING PLAN	AB 4.8	**(POPPY STREET) SANITARY SEWER PLAN AND PROFILE**
1.1	OVERLOT GRADING PLAN	AB 4.9	**W. (84TH LOOP) SANITARY SEWER PLAN AND PROFILE**
1.2	OVERLOT GRADING PLAN	AB 4.10	**(ORCHARD WAY) SANITARY SEWER PLAN AND PROFILE**
1.3	OVERLOT GRADING PLAN	AB 4.11	**(NOBLE COURT) SANITARY SEWER PLAN AND PROFILE**
1.4	OVERLOT GRADING PLAN	AB 4.12	**(WEST 83RD PLACE) SANITARY SEWER PLAN AND PROFILE**
1.5	OVERLOT GRADING PLAN	AB 4.13	**(MOSS CIRCLE) SANITARY SEWER PLAN AND PROFILE**
1.6	OVERLOT GRADING PLAN	AB 4.14	**(EMERGENCY ACCESS ROAD) SANITARY SEWER PLAN AND PROFILE**
1.7	OVERLOT GRADING PLAN	AB 5.0	**POND A**
1.8	OVERLOT GRADING PLAN - TRAILS	AB 5.1	**POND A DETAILS**
1.9	JEFFERSON COUNTY POND	AB 5.2	**POND B DESIGN**
1.10	BORROW PLAN	AB 5.3	**POND C DESIGN**
AB 2.0	**OVERALL UTILITY PLAN**	5.4	OFFSITE POND E STORM OUTFALL
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3.1	WEST 84TH DRIVE ROADWAY DESIGN 21+55 TO 33+10	AB 6.0	**WEST 84TH LANE STORM SEWER PLAN AND PROFILE**
3.2	WEST 84TH DRIVE ROADWAY DESIGN 33+10 TO 44+65	AB 6.1	**WEST 84TH DRIVE STORM SEWER PLAN AND PROFILE**
3.3	WEST 84TH LANE ROADWAY DESIGN 44+65 TO 48+58	AB 6.2	**ORCHARD WAY STORM SEWER PLAN AND PROFILE**
3.4	WEST 85TH DRIVE ROADWAY DESIGN	AB 6.3	**ORION WAY STORM SEWER PLAN AND PROFILE**
3.5	POPPY LOOP ROADWAY DESIGN	AB 6.4	**ORION WAY STORM 21+00 - 23+00**
3.6	POPPY STREET ROADWAY DESIGN	AB 6.5	**MOSS CIRCLE STORM 9+50 - 16+00**
3.7	W. 84TH LOOP ROADWAY DESIGN	AB 6.6	**EMERGENCY ACCESS ROAD STORM DRAIN 18+00 - 26+00**
3.8	ORCHARD WAY ROADWAY DESIGN	AB 6.7	**EMERGENCY ACCESS ROAD STORM OUTFALL 26+00 - 28+78**
3.9	ORION WAY ROADWAY DESIGN 10+00 TO 16+50	AB 7.0	**(WEST 85TH DRIVE) WATERLINE PLAN & PROFILE**
3.10	ORION WAY ROADWAY DESIGN 16+50 TO 27+50	AB 7.1	**(WEST 84TH LANE) WATERLINE P&P STA 10+00 TO 21+55**
3.11	ORION WAY ROADWAY DESIGN 27+50 TO 34+50	AB 7.2	**(WEST 84TH DRIVE) WATERLINE P&P STA 21+55 TO 33+10**
3.12	NOBLE COURT ROADWAY DESIGN	AB 7.3	**(WEST 84TH DRIVE) WATERLINE P&P STA 33+10 TO 44+65**
3.13	WEST 83RD AVE. & PLACE ROADWAY DESIGN	AB 7.4	**(WEST 84TH LANE) WATERLINE P&P STA 44+65 TO 48+58.37**
3.14	MOSS CIRCLE ROADWAY DESIGN 10+00 TO 21+00	AB 7.5	**(POPPY LOOP) WATERLINE PLAN AND PROFILE**
3.15	EMERGENCY ACCESS ROAD DESIGN 21+00 TO 30+50	AB 7.6	**(POPPY STREET) WATERLINE PLAN AND PROFILE**
3.16	WEST 84TH PLACE ROADWAY DESIGN	AB 7.7	**(84TH LOOP) WATERLINE PLAN AND PROFILE**
3.17	LEYDEN ROAD	AB 7.8	**(ORCHARD WAY) WATERLINE PLAN AND PROFILE**
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AB 4.1	**LEYDEN ROCK SANITARY SEWER OUTFALL**	AB 7.10	**(WEST 83RD PLACE) WATERLINE PLAN AND PROFILE**
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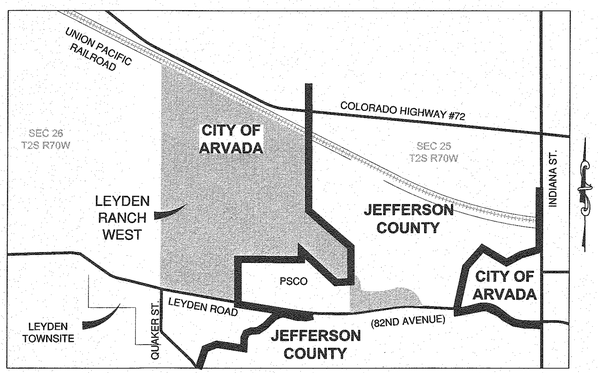
AB 4.3	**(WEST 84TH DRIVE) SANITARY SEWER P&P 21+55 TO 33+30**	8.1	SIGNAGE AND STRIPING PLAN
AB 4.4	**(WEST 84TH DRIVE) SANITARY SEWER P&P 33+30 TO 44+65**	8.2	SIGNAGE AND STRIPING PLAN
AB 4.5	**(WEST 84TH LANE) SANITARY SEWER 44+65 TO 48+58.37**	9.0	DETAILS
AB 4.6	**(WEST 85TH DRIVE) SANITARY SEWER P&P**		

→ 5.0B LOWER POND A OUTFALL AB

→ 8.2A LEYDEN ROAD INTERIM SIGNAGE AND STRIPING PLAN



JURISDICTIONAL BOUNDARY MAP

SCALE 1" = 1000'

PROJECT CONTACTS
OWNER/DEVELOPER:
TAYLOR MORRISON
1420 W. CANAL COURT, SUITE 170
LITTLETON, CO 80120

CIVIL ENGINEERS:
CVL CONSULTANTS
10333 E. DRY CREEK SUITE 240
ENGLEWOOD CO 80112
(720) 482-9526

PLANNER
PCS GROUP
#3, B-180 INDEPENDENCE PLAZA
1007 16TH STREET
DENVER, CO 80265
(303) 531-4905

CITY OF ARVADA
ENGINEERING DEPARTMENT
(720) 898-7640

JEFFERSON COUNTY
TRANSPORTATION ENGINEERING DEPARTMENT
(303) 271-8485

ARVADA FIRE PROTECTION DISTRICT
(303) 424-3012

PROJECT BENCHMARK: EAST ¼ CORNER SECTION 25, T. 2 S., R. 70 W., 6TH PM, A 2 ½" ALUMINUM CAP IN A RANGE BOX LS 28286 DATED 2006. ELEVATION = 5717.92 CITY OF ARVADA.

PROJECT DATUM: CITY OF ARVADA ELEVATION = NAVD 88 - 2.5'

BASIS OF BEARING: BEARINGS ARE BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, JEFFERSON COUNTY, COLORADO AS BEING MONUMENTED AT THE EAST QUARTER CORNER WITH A 3.25" A.C. LS 11434 1999 AND AT THE SOUTHEAST CORNER WITH A PK NAIL WITH REFERENCE TIES BEARING SOUTH 00°28'44" EAST A DISTANCE OF 2644.57 FEET.

COLORADO LICENSED 35693 PROFESSIONAL ENGINEER 8-3-13

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
1-800-922-1987
UNCC UTILITY NOTIFICATION CENTER OF COLORADO

CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	UTILITY CONFLICTS RESOLVED	11/6/13	ILG		
3	REVISED SDMH RIM ELEVATIONS	6/2/14	MJP		
2	REMOVE WALLS ON ORION WAY	8/19/13	SJK		
1	REVISE SHT 6.7 PER TUCKER DITCH	8/19/13	SJK		

CVL CONSULTANTS
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

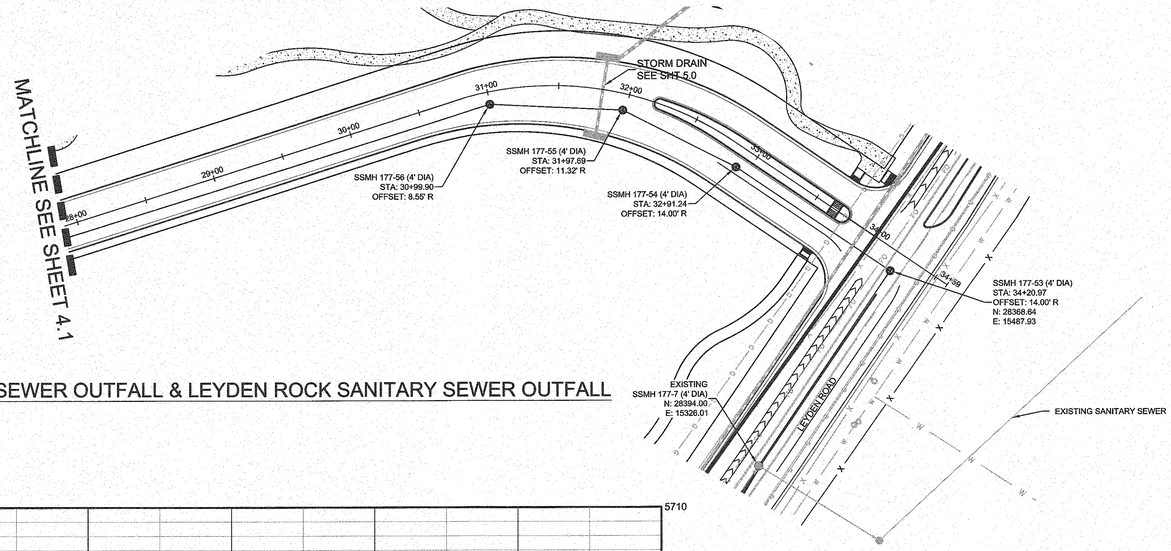
Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

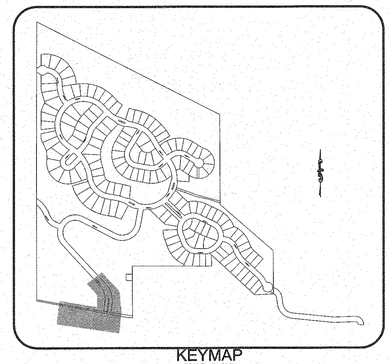
LEYDEN RANCH WEST
Arvada, Colorado
COVER SHEET

SCALE: AS SHOWN
DRAWN BY: SL
CHECKED BY: SJK
DATE: 5/31/2013
FILE NO: 30131801

SHEET NUMBER 0.0

0.0 COVER SHEET AS-BUILT.dwg





PLAN: (ORION WAY) SANITARY SEWER OUTFALL & LEYDEN ROCK SANITARY SEWER OUTFALL

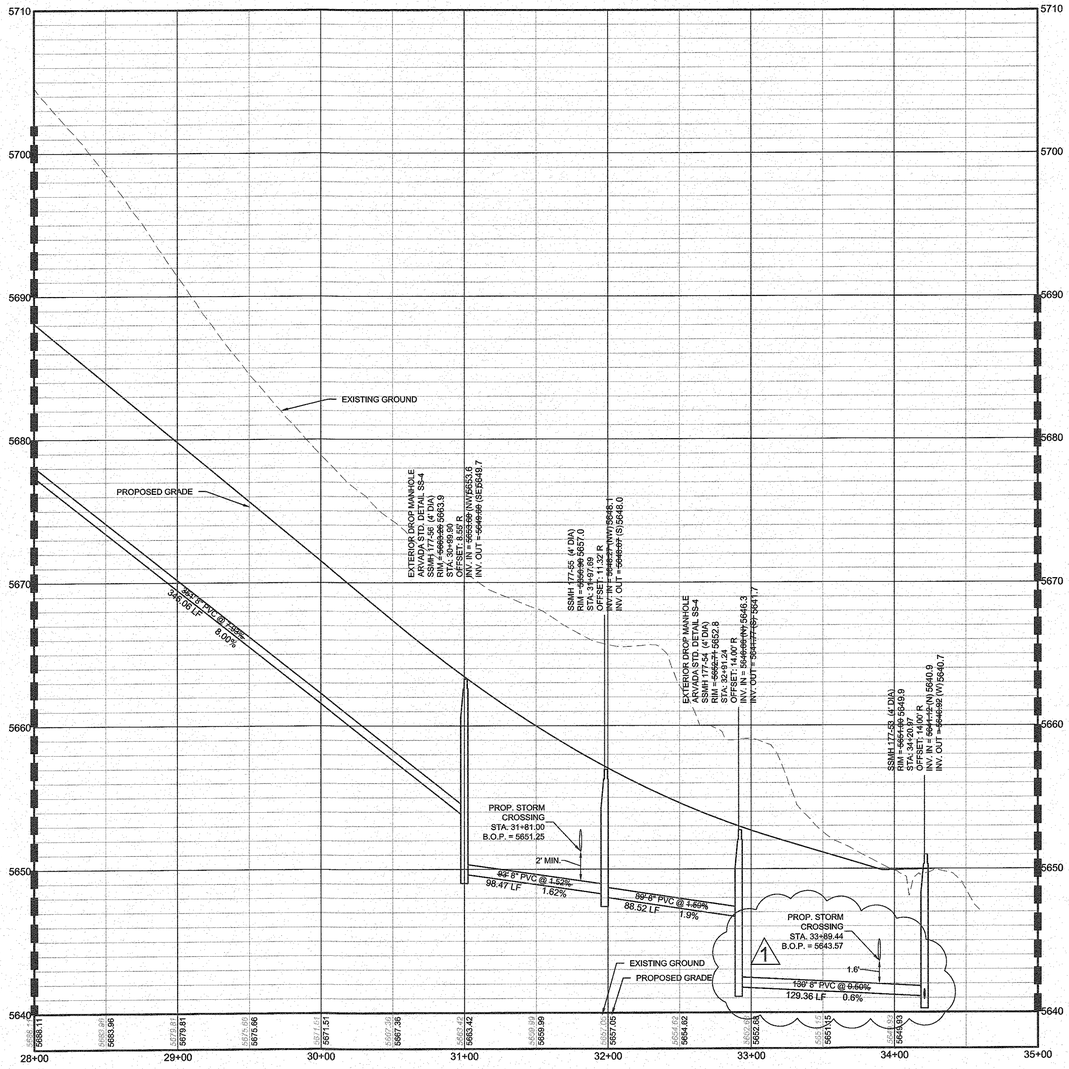
HORIZONTAL SCALE: 1" = 50'

AS-BUILT

50 25 0 50 100

SCALE: 1" = 50'

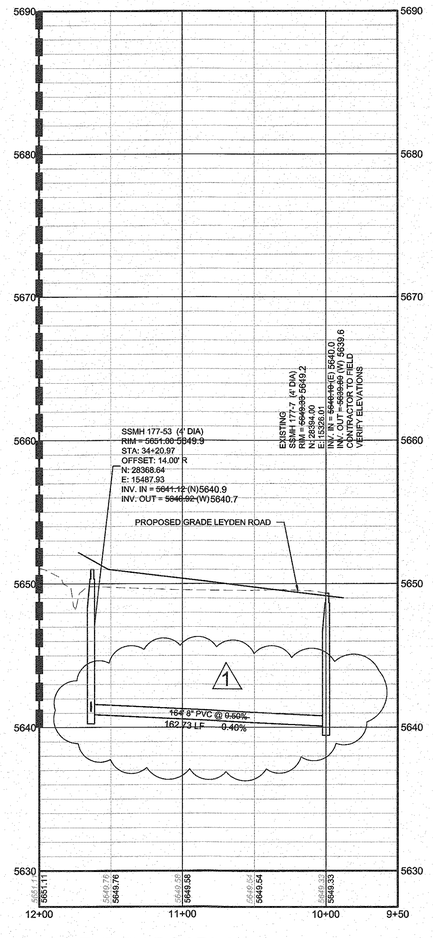
LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED LOW POINT BLOW-OFF
	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE



PROFILE: (ORION WAY) SANITARY SEWER OUTFALL

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

MATCHLINE SEE THIS SHEET



PROFILE: (LEYDEN ROAD) SANITARY SEWER OUTFALL

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

COLORADO LICENSED PROFESSIONAL ENGINEER 35693 8-3-15 PROFESSIONAL ENGINEER

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

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CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
1	REVISED LEYDEN WEST CROSSING	8/19/13	SJK		
		6/2/14	MJP		

10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

CVL CONSULTANTS

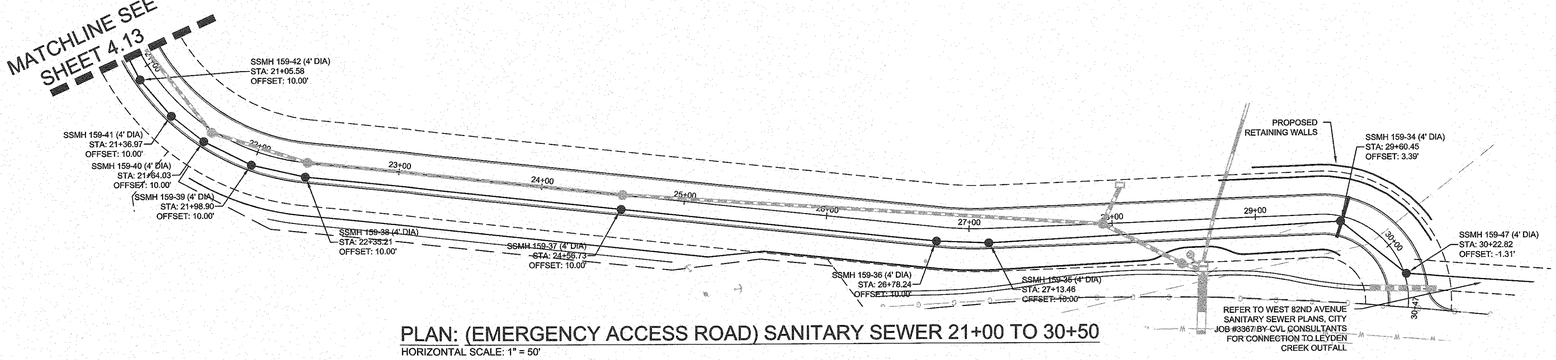
Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
LEYDEN ROCK SANITARY SEWER OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: ORION WAY/A
CHECKED BY: SJK
DATE: 5/31/2013

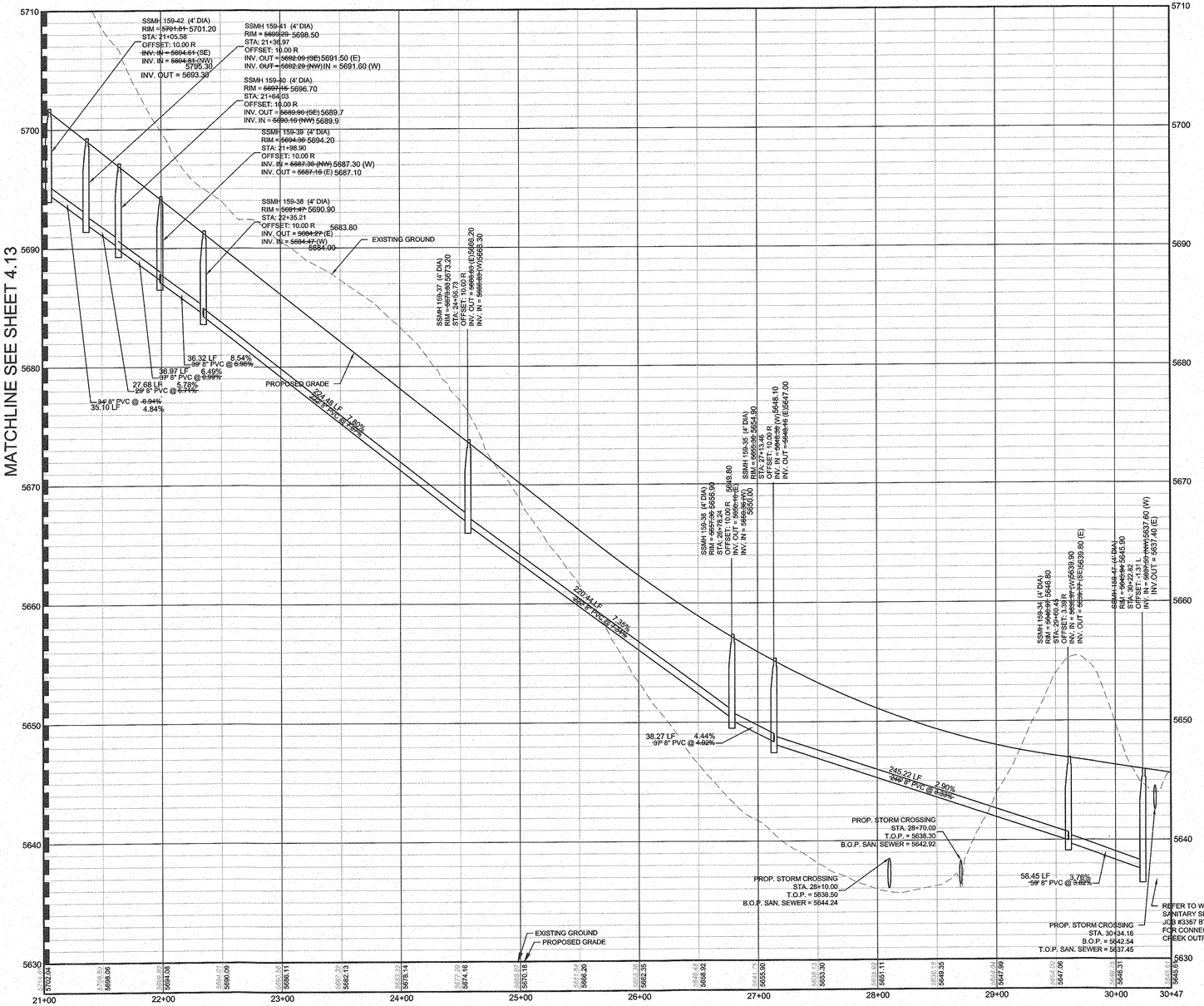
SHEET NUMBER 4.0

4.0 (5) SANITARY 15=50 9/18/14 AS-BUILT.dwg



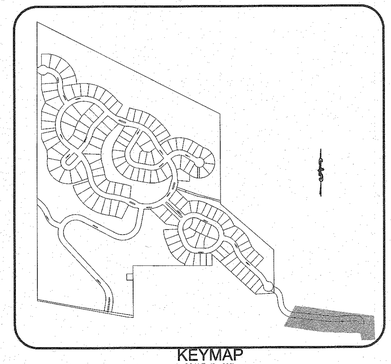
PLAN: (EMERGENCY ACCESS ROAD) SANITARY SEWER 21+00 TO 30+50

HORIZONTAL SCALE: 1" = 50'



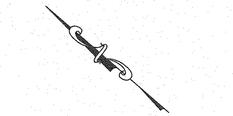
PROFILE: (EMERGENCY ACCESS ROAD) SANITARY SEWER

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



KEYMAP
SCALE: 1" = 800'

AS-BUILT



50 25 0 50 100

SCALE: 1" = 50'

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
BO	PROPOSED LOW POINT BLOW-OFF
W	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

No.	Revisions	Date	Init.	Appr.	Date
			MJP		6/2/14
			SJK		8/19/13
			SJK		8/19/13

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LEYDEN RANCH WEST
Arvada, Colorado
(EMERGENCY ACCESS ROAD)
SANITARY SEWER P&P 21+00 TO31+50

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

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AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CITY ENGINEER

DATE

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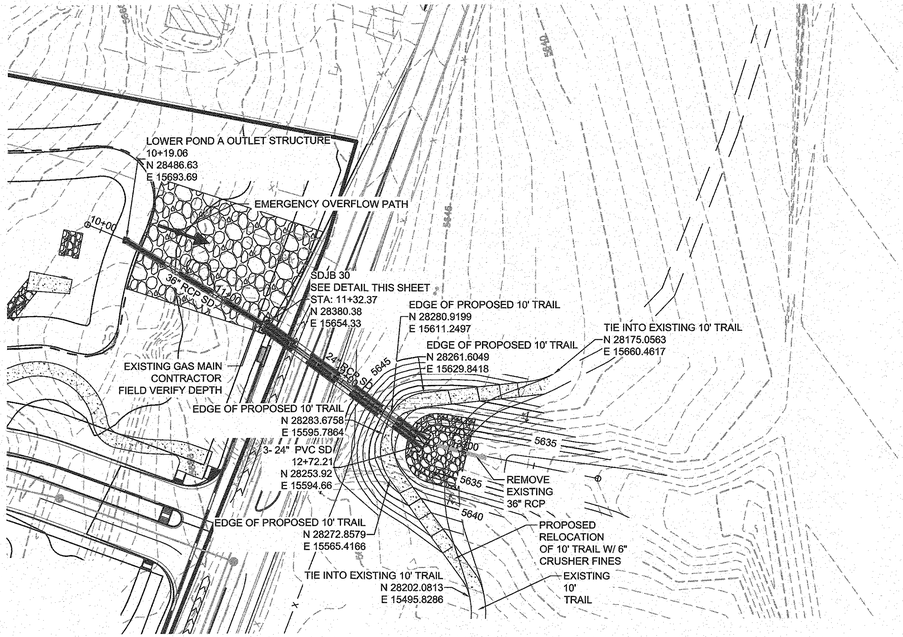
1-800-922-1987

SCALE:	AS SHOWN	FILE NO:	30131801
DRAWN BY:	GM	CHECKED BY:	SJK
DATE:	5/31/2013		

SHEET NUMBER **4.14**

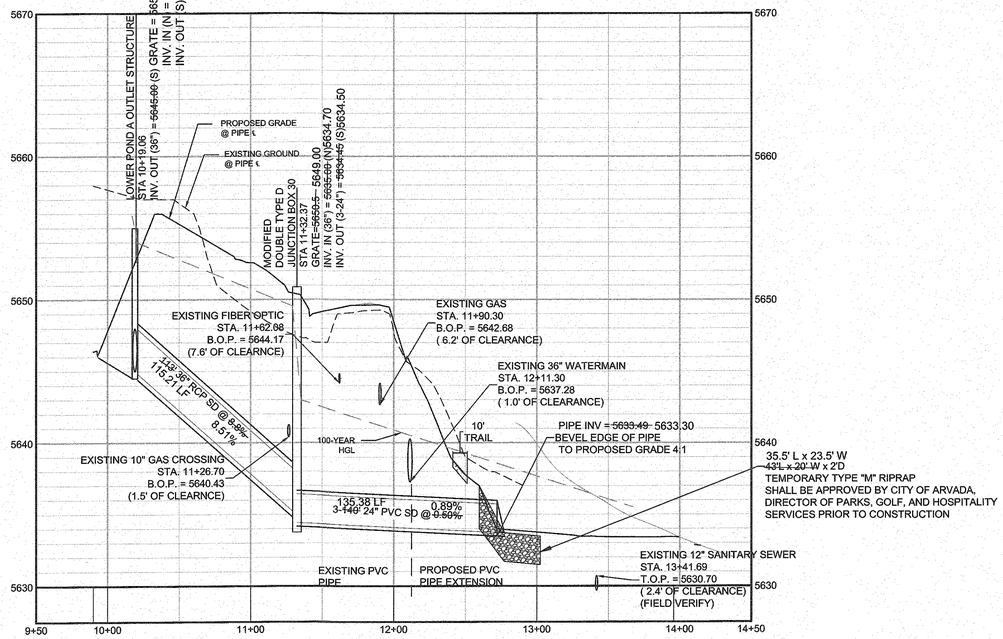
4.14 (J) SANITARY 21+00 to 30+50 AS-BUILT.dwg



PLAN: LOWER POND A OUTFALL

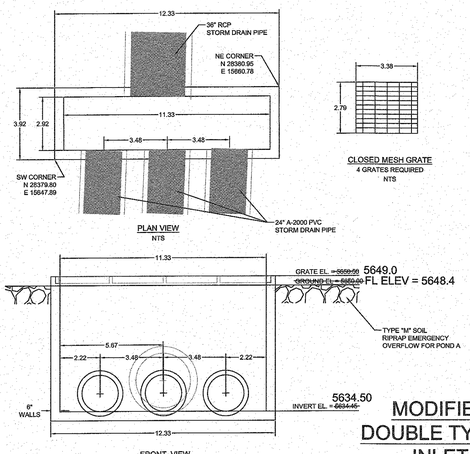
HORIZONTAL SCALE: 1" = 50'

AS-BUILT



PROFILE: LOWER POND A OUTFALL

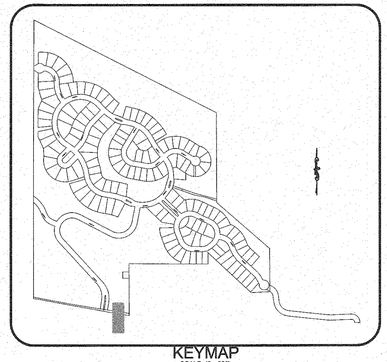
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



MODIFIED DOUBLE TYPE D INLET

NOTE:
SEE C.D.O.T M-604-11 TYPE D INLET DETAIL FOR STRUCTURAL DETAILS
(NO INTERIOR WALLS)

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED LOW POINT BLOW-OFF
	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

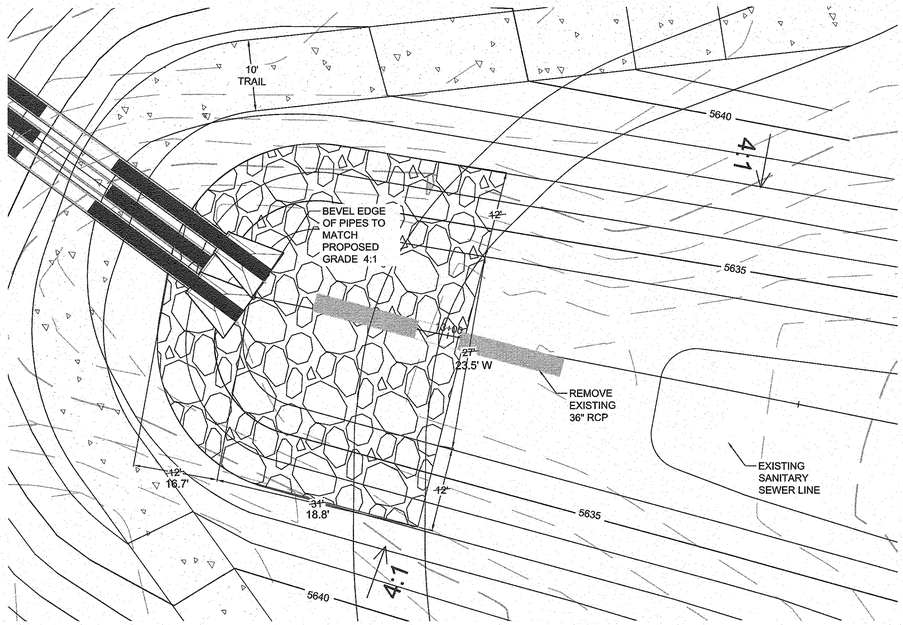


KEYMAP
SCALE: 1" = 600'

50 25 0 50 100

SCALE: 1" = 50

NOTE:
1) SEE SHEET 5.1 FOR POND DETAILS.



PLAN: RIPRAP DETAIL

HORIZONTAL SCALE: 1" = 10'

COLORADO REGISTERED JAMES J. JANNICKE 35693 PROFESSIONAL ENGINEER 8-3-15

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
1-800-922-1987
UNCC UTILITY NOTIFICATION CENTER OF COLORADO

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

CITY ENGINEER

DATE

3364
JOB NUMBER

Review is for general compliance with the city of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements", lasted edition. Sole responsibility for completeness and or accuracy of these Documents shall remain with the Registered Professional Engineer sealing these Plans. The city does not accept liability for facilities designed by others.

ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	UTILITY CONFLICTS RESOLVED	11/3/2013	ILG		
7	RFI #20	8/27/2014	MJP		
		8/19/13	SJK		
		8/19/13	SJK		

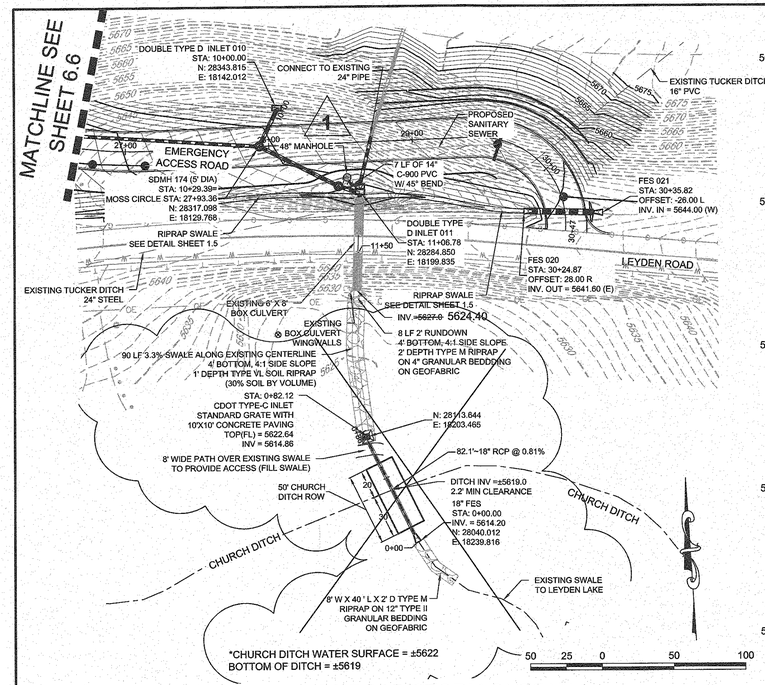
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482.9526
Fax: (720) 482.9546
CVL CONSULTANTS

Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
LOWER POND A OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: JJC
CHECKED BY: SJK
DATE: 5/31/2013
SHEET NUMBER: 5.0b
5.0b POND A AS-BUILT.dwg

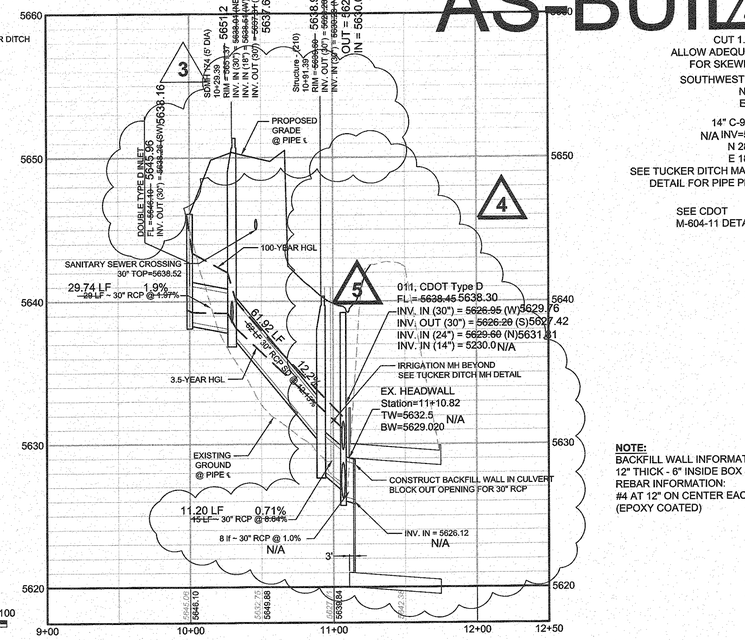
AS-BUILT 4



PLAN: EMERGENCY ACCESS ROAD STORM OUTFALL

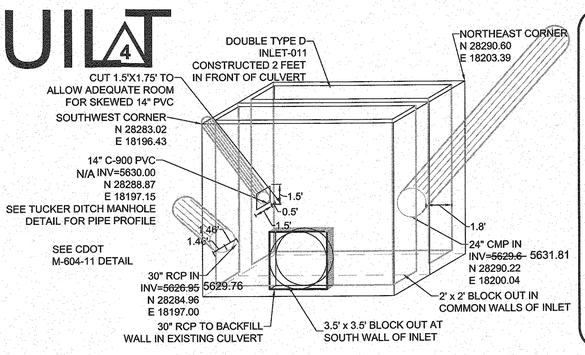
HORIZONTAL SCALE: 1" = 50'

SCALE: 1" = 50'



PROFILE: EMERGENCY ACCESS ROAD STORM OUTFALL 10+00 TO 12+33

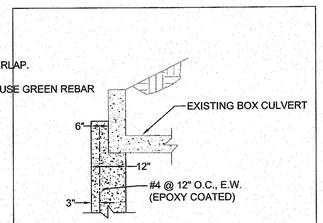
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



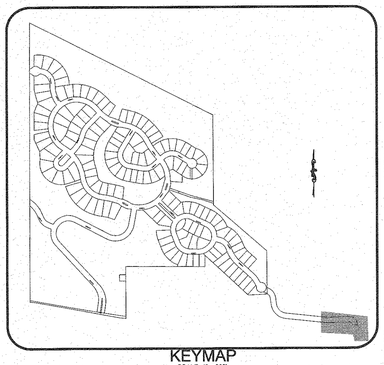
PLAN: INLET 011 ISOMETRIC DETAIL

HORIZONTAL SCALE: 1" = 5'

NOTE:
BACKFILL WALL INFORMATION:
12" THICK - 6" INSIDE BOX & 6" OVERLAP.
REBAR INFORMATION:
#4 AT 12" ON CENTER EACH WAY. USE GREEN REBAR (EPOXY COATED)



BACKFILL WALL DETAIL
NTS



CHURCH DITCH WATER AUTHORITY NOTES

1. DEFINITIONS
   A. FACILITY OWNER - CHURCH DITCH WATER AUTHORITY (CDWA)
   B. PROPERTY OWNER - **(TO BE COMPLETED)**
   C. CONTRACTOR - **(TO BE COMPLETED)**
   D. ENGINEER - **(TO BE COMPLETED)**.
2. ALL IRRIGATION AND CANAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DESIGN CRITERIA FOR FACILITIES OF THE CHURCH DITCH WATER AUTHORITY, LATEST EDITION, EXCEPT AS MODIFIED BY THESE PROJECT DRAWINGS.
3. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD CDWA HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CDWA.
4. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH CDWA REPRESENTATIVE AND **(FILL IN LOCAL GOVERNING MUNICIPALITY OR COUNTY GOVERNMENT)** AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION. THOSE IN ATTENDANCE SHALL INCLUDE OWNER'S REPRESENTATIVE, ENGINEER, CONTRACTOR, AND OTHER AFFECTED AGENCIES. CONSTRUCTION PLANS WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING.
5. TECHNICAL APPROVAL BY CDWA OF THIS UTILITY CROSSING DESIGN OR FACILITY IMPROVEMENT SHALL NOT CONSTITUTE AUTHORIZATION TO BEGIN WORK. A LICENSE AGREEMENT, APPROVED CONSTRUCTION SCHEDULE AND WRITTEN NOTICE TO PROCEED FROM CDWA ARE ALSO REQUIRED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. FOLLOWING THE APPROVAL OF THE DESIGN PLANS AND LICENSE AGREEMENT AND PRIOR TO THE PRE-CONSTRUCTION MEETING, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT A CONSTRUCTION SCHEDULE TO CDWA FOR REVIEW AND APPROVAL. WRITTEN APPROVAL FROM CDWA OF AN ACCEPTED CONSTRUCTION SCHEDULE AND NOTICE TO PROCEED WILL BE NECESSARY PRIOR TO THE INITIATION OF ANY CONSTRUCTION WORK RELATED TO THIS DESIGN. THE SCHEDULE SHALL INCLUDE THE DAY, MONTH, AND YEAR WHEN WORK IS TO TAKE PLACE.
6. NO WORK THAT IMPACTS THE DITCH'S ABILITY TO OPERATE, MAINTAIN OR ACCESS IT'S FACILITES AND/OR CONVEY WATER WHEN REQUIRED WILL BE ALLOWED.
7. CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, UNLESS OTHERWISE AUTHORIZED BY CDWA AND PROPERTY OWNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS ACCESS FOR CDWA PERSONNEL ALONG THE LENGTH OF THE EXISTING CANAL THROUGHOUT THE COURSE OF THE PROJECT.
9. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY CDWA. CDWA RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DO NOT CONFORM TO STANDARDS AND SPECIFICATIONS.
10. CONTRACTOR SHALL VERIFY ACCURACY BETWEEN WORK SET FORTH ON THESE PLANS AND WORK REQUIRED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND CDWA REPRESENTATIVE PRIOR TO START OF CONSTRUCTION.
11. IT IS THE ENGINEER'S RESPONSIBILITY TO RESOLVE CONSTRUCTION PROBLEMS WITH CDWA DUE TO CHANGED CONDITIONS ENCOUNTERED BY CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE SOLE OPINION OF CDWA, PROPOSED ALTERATIONS TO THE APPROVED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO CDWA FOR REVIEW AND APPROVAL, PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.
12. GROUNDWATER ENCOUNTED DURING CONSTRUCTION SHALL NOT BE RELEASED TO THE CHURCH DITCH OR OTHER FACILITIES WITHOUT WRITTEN APPROVAL FROM CDWA.
13. WHERE THE EXISTING SIDES OR BOTTOM OF THE DITCH IS DISTURBED AND IS TO BE REPLACED, THE TOP TWO (2) FEET OF BACKFILL MATERIAL SHALL BE CLAY CONTAINING AT LEAST 70% BY DRY WEIGHT PASSING THE #200 SIEVE OR CONTAINING TWO PERCENT (2%) POWDERED DRY BENTONITE BY DRY WEIGHT OF SOIL BLENDED INTO THE BACKFILL MATERIAL.
14. COMPACTION TESTING FREQUENCY: COMPACTION OF BEDDING AND ALL TYPES OF BACKFILL SHALL BE TESTED AT A RATE OF AT LEAST ONE (1) TEST PER 200 CUBIC YARDS OF FILL MATERIAL OR PORTIONS THEREOF AND AT LEAST ONE (1) TEST PER 150 FEET, WHICHEVER CONTROLS. THE TESTING SHALL BE AT VARIOUS DEPTHS AND LOCATIONS. TEST RESULTS SHALL BE SUBMITTED TO CDWA'S REPRESENTATIVE WITHIN TWENTY-FOUR (24) HOURS OF THE TEST OR ON THE NEXT WORKING DAY.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAILY CLEANING OF DEBRIS THAT ENTERS THE CANAL RESULTING FROM THE CONSTRUCTION. CONTRACTOR SHALL MAINTAIN SILT FENCE AND OTHER EROSION CONTROL BMP'S ON A DAILY BASIS.
16. UNLESS ANOTHER SPECIFIC MAINTENANCE AGREEMENT IS IN PLACE, CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FUNCTIONING OF FACILITY IMPROVEMENTS FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION / CONSTRUCTION ACCEPTANCE OF THE IMPROVEMENTS BY CDWA. ANY FAILURE DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY CONTRACTOR TO THE SATISFACTION OF CDWA AT CONTRACTOR'S EXPENSE.
17. RECORD DOCUMENTS ARE TO BE SUPPLIED TO CDWA PRIOR TO SUBSTANTIAL COMPLETION / CONSTRUCTION ACCEPTANCE OF THE CONSTRUCTION. MYLAR RECORD DOCUMENTS AND AN ELECTRONIC VERSION OF THE DRAWINGS (PDF OR AUTOCAD FORMAT) SHALL BE SUBMITTED PRIOR TO CDWA ACCEPTANCE AND SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

LEGEND	
	PROPOSED BLOW-OFF
	PROPOSED REDUCER
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
BO	PROPOSED LOW POINT BLOW-OFF
M	PROPOSED WATER METER
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED STORM DRAIN INLET
	PROPOSED FLARED END SECTION
	PROPOSED HEADWALL
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	UTILITY DESCRIPTION
	UTILITY DESCRIPTION
	LIGHT POLE

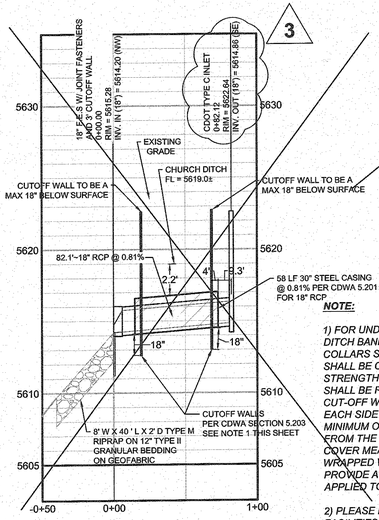
NOTE:

THE IMPROVEMENTS SOUTH OF LEYDEN ROAD ARE SHOWN HERON FOR ILLUSTRATIVE PURPOSES ONLY. ANY IMPROVEMENTS IN THIS AREA ARE BEING DESIGNED AND CONSTRUCTED BY JEFFERSON COUNTY, UNDER THEIR REVIEW AUTHORITY, AS AN EXTENSION OF THE JEFFERSON COUNTY LEYDEN LANDFILL DRAINAGE BYPASS SYSTEM. THESE IMPROVEMENTS ARE THE PURVIEW OF JEFFERSON COUNTY, ARE SUBJECT TO CHANGE, AND NO SUBSEQUENT REVIEW OR APPROVAL BY THE CITY OF ARVADA WILL BE REQUIRED.

CDWA DETAILS REMOVED

CDWA DETAILS REMOVED

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.



CDWA DETAIL

HORIZONTAL DIR. DRILL CUTOFF WALL

NOTE:

1) FOR UNDERGROUND UTILITIES INSTALLED BY TRENCHING THROUGH THE DITCH BANKS, OR WITHIN THE DITCH ROW, REINFORCED CONCRETE CUTT-OFF COLLARS SHALL BE PROVIDED AT BOTH RIGHT OF WAY LINES. CUT-OFF WALLS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE (COMPRESSIVE STRENGTH 3000 PSI AFTER 28 DAYS) TO A MINIMUM THICKNESS OF 8", AND SHALL BE REINFORCED WITH #4 REINFORCING BARS AT 8" EACH WAY. THE CUT-OFF WALLS SHALL BE SET INTO UNDISTURBED SOIL A MINIMUM OF 18" TO EACH SIDE OF AND BELOW THE ENCASEMENT PIPE, AND SHALL BE CAST A MINIMUM OF 4 FEET FROM THE END OF THE CASING AND A MINIMUM OF 3 FEET FROM THE LIMITS OF THE FLOW SECTION, AND SHALL HAVE A MAXIMUM OF 18" COVER MEASURED AT THE TOP OF EACH WALL. THE CASING PIPE IS TO BE WRAPPED WITH A LAYER OF RAM-NECK OR SIMILAR MATERIAL SO AS TO PROVIDE A WATERTIGHT SEAL WITH THE CONCRETE. THIS MATERIAL IS TO BE APPLIED TO THE CASING PIPE WITHIN THE FORMS FOR THE CUT-OFF WALL.

2) PLEASE REFER TO " DESIGN REVIEW PROCESS AND DESIGN CRITERIA FOR FACILITIES, CDWA CHURCH DITCH WATER AUTHORITY AMENDED 12/13/10" FOR PIPE CASING REQUIREMENTS AND CUT-OFF WALL DESIGN..

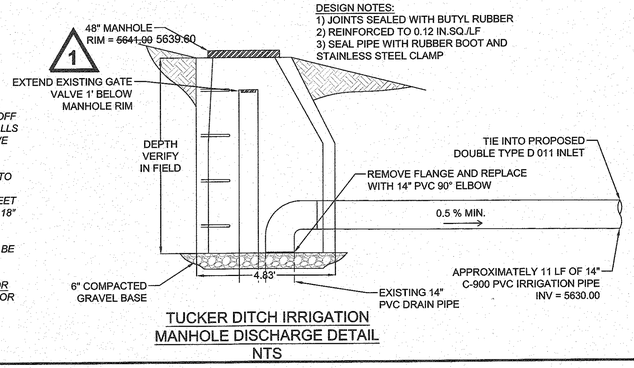
PROFILE: CHURCH DITCH STORM CROSSING

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

CDWA DETAIL

SEEPAGE COLLAR

DESIGN NOTES:
1) JOINTS SEALED WITH BUTYL RUBBER
2) REINFORCED TO 0.12 IN.SQ./LF
3) SEAL PIPE WITH RUBBER BOOT AND STAINLESS STEEL CLAMP



TUCKER DITCH IRRIGATION MANHOLE DISCHARGE DETAIL
NTS

ADDITIONAL CHURCH DITCH WATER AUTHORITY NOTES

1. ALL BACKFILL SHALL BE PLACED IN LIFTS AND SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY FOR THE MATERIAL AS DETERMINED BY TESTS MADE IN CONFORMANCE WITH ASTM D698 (STANDARD PROCTOR COMPACTION METHOD). SOIL OF POOR QUALITY REMOVED FROM THE EXCAVATION SHALL BE REMOVED FROM THE SITE AND SELECT FILL USED FOR TRENCH, BACKFILL AND CONSTRUCTION OF EMBANKMENTS. THE CDWA ENGINEER WILL INSPECT THE CONSTRUCTION AND THEIR FEES WILL BE REIMBURSED BY THE PERMIT APPLICANT. SOIL DENSITY TESTS, IF REQUIRED BY THE CDWA, SHALL BE DONE BY AN INDEPENDENT LABORATORY AND PAID FOR BY THE APPLICANT. SOIL'S USED FOR SELECT FILL SHALL BE CLASSIFIED IN CONFORMANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM AS TYPE SM, SC, ML, CL, OR ANY COMBINATION.
2. BACKFILL SHALL NOT BE PLACED IN STANDING WATER NOR SHALL SNOW, ICE, FROZEN EARTH OR ORGANIC MATERIAL BE INCORPORATED IN THE FILL. THE DITCH SHALL BE LINED FOR 10 FEET ON EACH SIDE OF THE CROSSING WITH A 6-INCH LAYER OF IMPERVIOUS MATERIAL SUCH AS CLAY, OR BENTONITE. THE IMPERVIOUS MATERIAL SHALL BE SPREAD EVENLY FOR 10 FEET ON EACH SIDE OF THE TRENCH CROSSING AT A RATE OF ONE POUND PER CUBIC FOOT. IT SHALL THEN BE MIXED WITH THE TOP 3 TO 4 INCHES OF EXISTING GROUND SURFACE MATERIALS BY HAND RAKING OR TILLING AND COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY. THE CDWA BANK SIDE SLOPE SHALL BE CONSTRUCTED TO A SLOPE NO STEEPER THAN OF 2:1.
3. CONTINUOUS ACCESS ALONG THE CHURCH DITCH ACCESS ROADS MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. A NOTE TO THIS EFFECT SHALL BE ADDED TO THE DRAWINGS.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
1-800-922-1987
UNCC UTILITY NOTIFICATION CENTER OF COLORADO



I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

JAMES J. JANNICKE
COLORADO P.E. 35693

PREPARED UNDER THE SUPERVISION OF

CITY ENGINEER

DATE

3364
JOB NUMBER

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ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
6	REVISIONS PER JEFCO	3/27/14	JFF		
5	REVISED RCP/ TYPE D INVERTS TO CULVERT	3/26/14	ILG		
4	REVISED CULVERT/INLET CONFIGURATION	1/10/13	JJC		
3	REVISED SDMH RIM ELEVATIONS	8/29/13	ILG		
1	REVISE SHEET 6.7 PER TUCKER DITCH	7-24-13	ILG		

CVL CONSULTANTS
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

Taylor Morrison
1420 W. Canal Court, Suite 170
Littleton, CO 80120

LEYDEN RANCH WEST
Arvada, Colorado
EMERGENCY ACCESS ROAD STORM OUTFALL

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: BPW
CHECKED BY: SJK
DATE: 5/31/2013

SHEET NUMBER **6.7**

6.7 (J) STORM Z 2-53-SUMT.dwg

~~CONSTRUCTION PLANS~~ RECORD DRAWINGS

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
A PORTION OF SECTION 25 AND A PORTION OF SECTION 26
TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M.
CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 26 BEARS S 00°00'39" W AND MONUMENTED AS FOLLOWS:

- THE EAST QUARTER CORNER OF SECTION 26 BEING A FOUND CHISELED "+" IN THE TOP OF A 7"x14" STONE WITH CHISELED "½" ON THE WEST SIDE FLUSH WITH GROUND LEVEL.
- THE SOUTHEAST CORNER OF SECTION 26 BEING A FOUND CHISELED "+" IN THE TOP OF A 6"x11" SANDSTONE 1.1' ABOVE GROUND LEVEL IN CONCRETE.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

CITY OF ARVADA DATUM CONVERSION = NAVD 88 - 2.45' = 5896.79

PUBLIC IMPROVEMENT QUANTITIES

STREET QUANTITIES

ITEM DESCRIPTION	CENTER LENGTH (LF)	PAVEMENT (SY)	VERTICAL CURB (LF)	SIDEWALK LENGTH (LF)	X-PANS (EA)
LEYDEN ROAD (EAST OF QUAKER - NORTH SIDE)	463	1,253	425	0	0
LEYDEN ROAD (EAST OF QUAKER - SOUTH SIDE	1,270	1,925	1,072	719	1
QUAKER STREET	161	304	51	0	0

STORM SEWER QUANTITIES
(LEYDEN ROAD EAST OF QUAKER STREET - SOUTH SIDE)

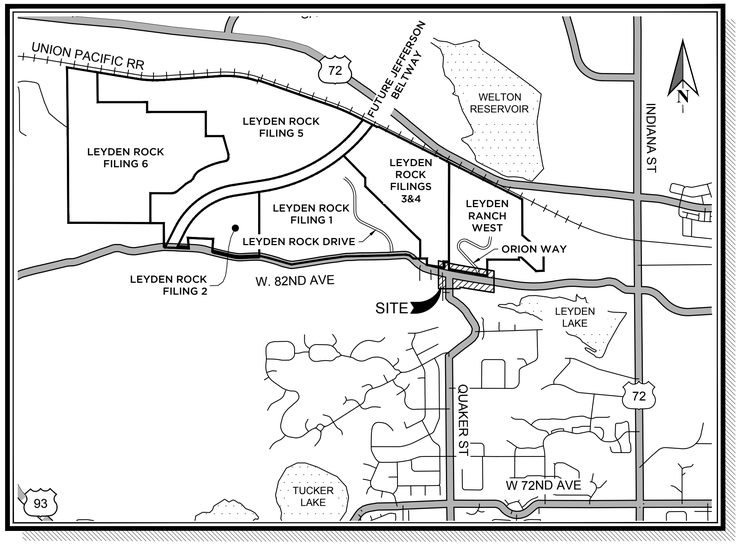
ITEM DESCRIPTION	QUANTITY	UNIT
36" RCP (CLASS III)	6	LF
18" RCP (CLASS III)	67	LF
5' TYPE R INLET (W/ WQ HOOD)	1	LF
10' TYPE R INLET	1	EA
STORMCEPTOR STC-900	1	EA
REMOVAL OF EXISTING 6' DIA. MANHOLE	1	EA

CERTIFICATION

"THESE CONSTRUCTION PLANS FOR LEYDEN ROAD STREET IMPROVEMENTS (QUAKER STREET TO ORION WAY) WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS"

COLORADO LICENSED OWEN KEITH KEENAN 03-05-18 47677 PROFESSIONAL ENGINEER

OWEN KEITH KEENAN, PE
KT ENGINEERING



VICINITY MAP
1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET *
02	GENERAL NOTES SHEET
03	TYPICAL SECTIONS *
04	TYPICAL SECTIONS AND DETAILS *
05	RIGHT-OF-WAY AND EASEMENTS 1
06	RIGHT-OF-WAY AND EASEMENTS 2
07	DEMOLITION & EXISTING UTILITY PLAN *
08	OVERALL GRADING AND STORM PLAN *
09	EROSION CONTROL PLAN *
10	EROSION CONTROL DETAILS
11	EROSION CONTROL DETAILS
12	SIGNING AND STRIPING PLAN *
13	ROADWAY PLAN AND PROFILE - LEYDEN ROAD *
14	ROADWAY PLAN AND PROFILE - LEYDEN ROAD *
15	ROADWAY PLAN AND PROFILE - QUAKER STREET *
16	CROSS SECTIONS - LEYDEN ROAD *
17	CROSS SECTIONS - LEYDEN ROAD *
18	CROSS SECTIONS - LEYDEN ROAD *
19	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD *
20	DETAILS *
21	DETAILED CURB RAMP GRADING PLAN *
*	DENOTES REVISED SHEET BY KT ENGINEERING
1	WATER PLAN
2	WATER PROFILE

LIST OF CONTACTS:

ENGINEER
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: OWEN KEENAN, PE

FIRE PROTECTION
ARVADA FIRE PROTECTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

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8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TRANG TRAN

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

- EXISTING MAJOR CONTOUR (5400)
- EXISTING MINOR CONTOUR
- EXISTING ELECTRIC UTILITY LINE (E)
- EXISTING UTILITY POLE
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING GAS UTILITY LINE (G)
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- PROPOSED MAJOR CONTOUR (5400)
- PROPOSED MINOR CONTOUR
- PROPOSED BOUNDARY LINE
- PROPOSED CENTER LINE
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SETBACK
- PROPOSED SANITARY SEWER LINE (100 LF 8" SAN)
- PROPOSED SANITARY SEWER SERVICE (SS STA: 1+00.00)
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UNDERDRAIN
- PROPOSED STORM SEWER LINE (100 LF 18" RCP)
- PROPOSED TYPE R INLET
- PROPOSED TYPE 16 INLET
- PROPOSED BOX BASE MANHOLE
- PROPOSED CIRCULAR MANHOLE
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- PROPOSED WATER LINE (100 LF 8" WAT)
- PROPOSED WATER SERVICE AND METER
- PROPOSED IRRIGATION SERVICE AND METER
- PROPOSED WATER GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED REDUCER
- PROPOSED BLOW-OFF
- PROPOSED BEND W/ THRUST BLOCK
- PROPOSED CROSS
- PROPOSED TEE
- PROPOSED AIR RELEASE VALVE
- PROPOSED PRESSURE REDUCING VALVE
- PROPOSED 100 YR WATER SURFACE ELEVATION
- PROPOSED FLOWLINE SWALE

APPROVED:

CITY ENGINEER _____ DATE _____ JOB NUMBER 3396

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
COVER SHEET

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 05/01/2017

01 OF 21

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-CVR-ARVADA.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

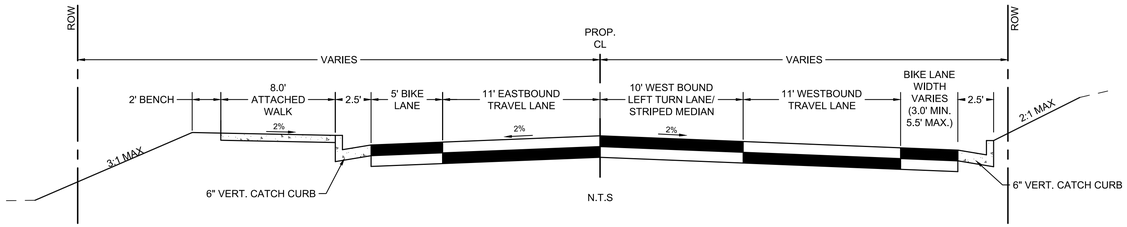
LEYDEN ROAD EAST OF QUAKER STREET (STA 150+58.46 - 153+00.50)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

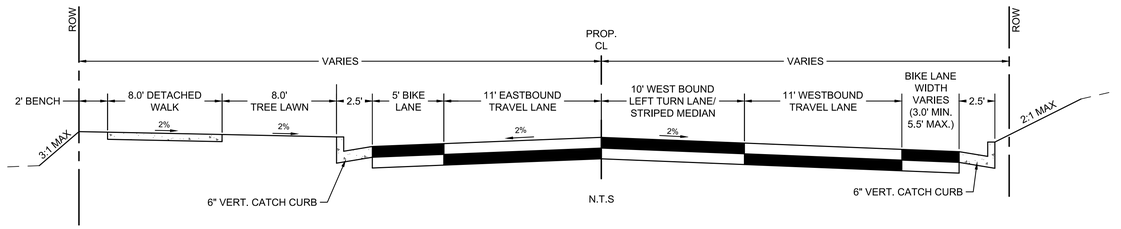
LEYDEN ROAD EAST OF QUAKER STREET (STA 153+37.78 - 154+36.07)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



KT ENGINEERING

12500 W. 58TH AVE. #230
ARVADA, CO 80002

P: 720.638.5190

WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/22/2017	LAL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/06/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED
OWEN MARTIN KEENAN
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
TYPICAL SECTIONS

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = N/A'

SUBMITTED ON:
05/01/2017

APPROVED:

CITY ENGINEER _____ DATE _____ 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

J:\JOBS\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-TYP-SECT-ARVADA.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

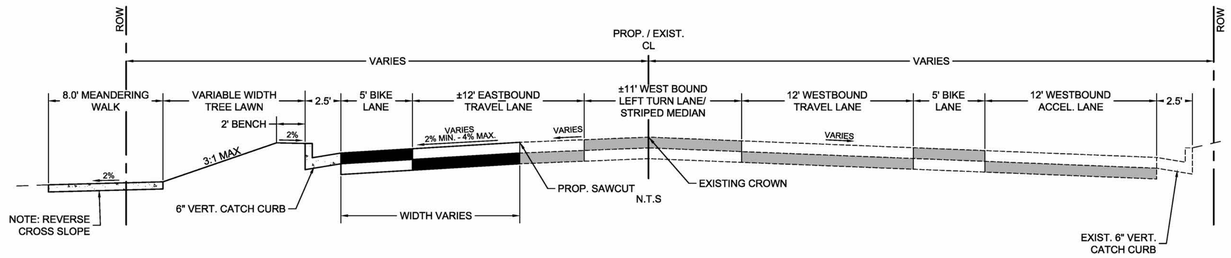
LEYDEN ROAD WEST OF ORION WAY (STA 155+81.39 - 157+32.81)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

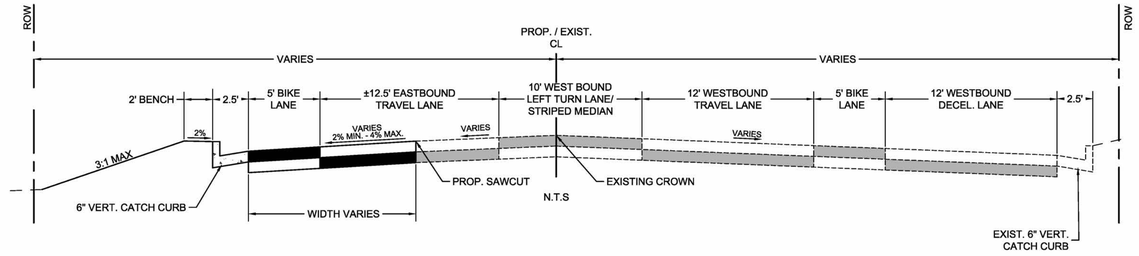
LEYDEN ROAD EAST OF ORION WAY (STA 158+40.02 - 159+30.14)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



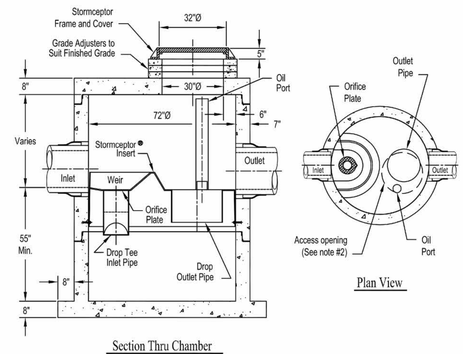
CITY OF ARVADA UTILITIES NOTES:

1. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 24 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.
2. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER OPERATIONS DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.
3. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.
4. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.
5. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.
6. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".
7. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.
8. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.
9. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION.
10. ALL 3/4" AND 1" DIAMETER WATER METER SERVICES SHALL HAVE AN EXTRA HEAVY DOME AND RECESSED COVER WITH A TRAFFIC RATED LID AS SPECIFIED IN SECTION 30.2.1 IN THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS.
11. ALL EXISTING SANITARY SEWER MANHOLES WITHIN THE PROPOSED WORK AREA ARE TO BE PROTECTED THROUGHOUT CONSTRUCTION. MANHOLE FRAME/LIDS SHALL BE ADJUSTED VERTICALLY TO MATCH IN WITH PROPOSED GRADING.

Rinker MATERIALS

Concrete Pipe Division

STC 900 Precast Concrete Stormceptor ®
(900 U.S. Gallon Capacity)



Section Thru Chamber

Plan View

Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 028

STORMCEPTOR STC-900 DETAIL
N.T.S.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	09/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED
OWEN TIMOTHY KENNEDY
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
TYPICAL SECTIONS, DETAILS & NOTES

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 05/01/2017

04 OF 21

APPROVED:

CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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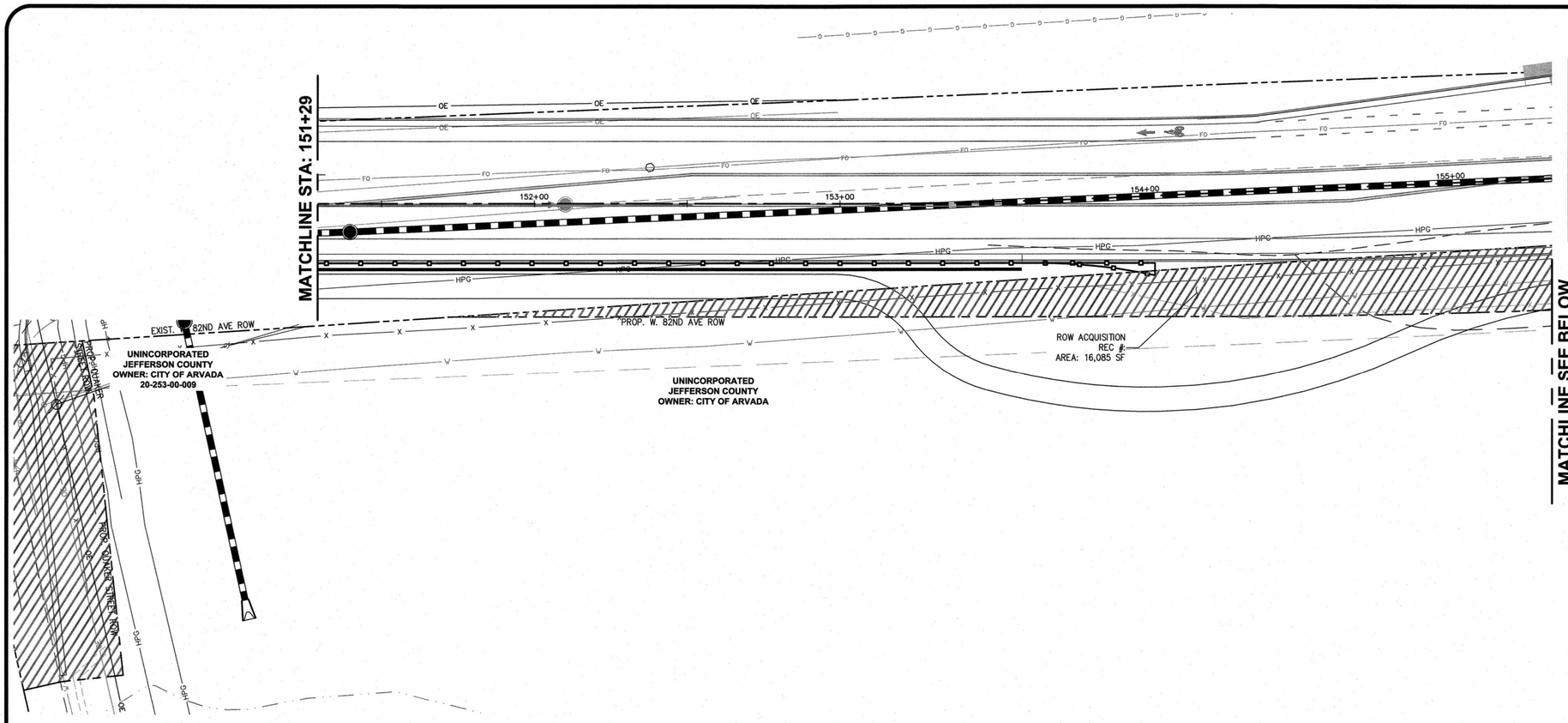
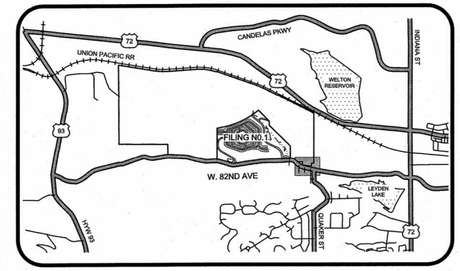


JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 20' HORIZ.

LEGEND

- TEMPORARY GRADING AND PERMANENT UTILITY EASEMENT
- ROW ACQUISITION

APPROVED:

CITY ENGINEER | DATE | JOB NUMBER 3396

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.umcc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER
26988
4/7/15

JEHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
RIGHT OF WAY & EASEMENTS 2
prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 3396-DR-FILING-2-ROW-EASEMENTS.dwg
APPROVED BY:

JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 20'
SHEET NO: 6 OF 21

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UTILITY LEGEND

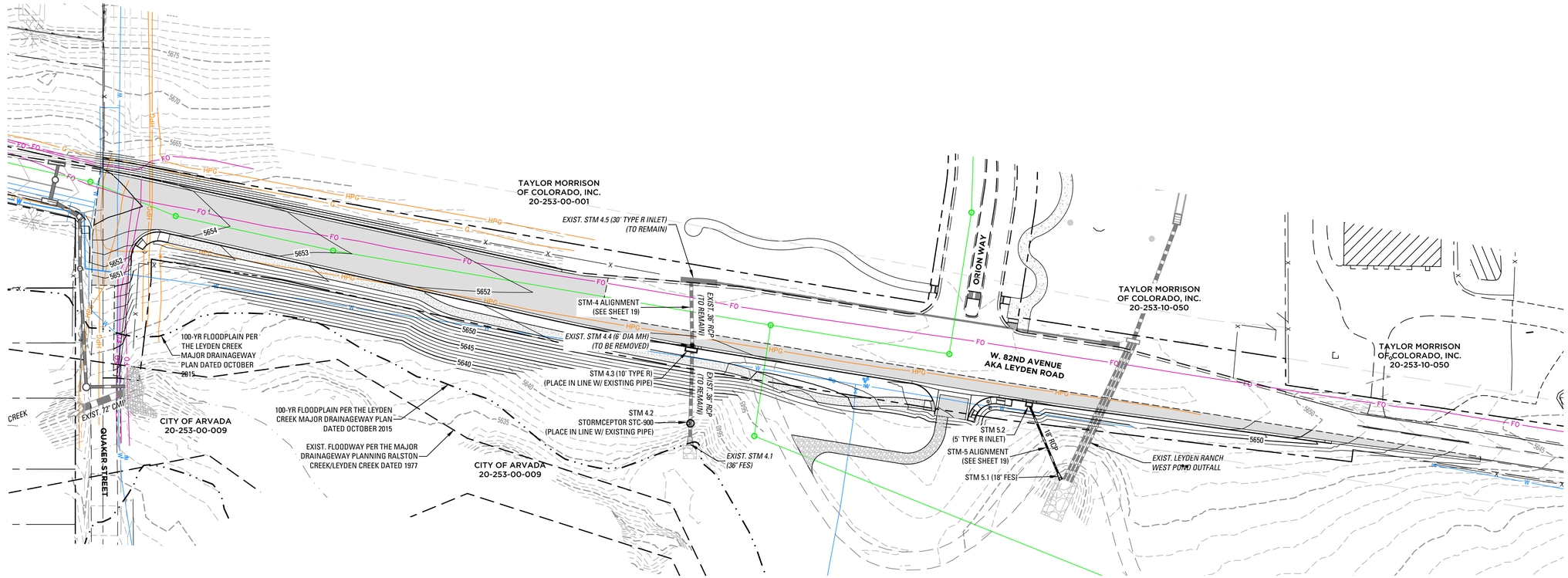
- W — EXISTING WATER LINE
- EXISTING SANITARY LINE
- FO — EXISTING FIBER OPTIC
- HPG — EXISTING HIGH PRESSURE GAS
- G — EXISTING GAS
- EXISTING STORM LINE
- PROPOSED STORM LINE

EXISTING UTILITY NOTE

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES WITHIN THE WORK AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR AN DAMAGE AT HIS EXPENSE.

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES, DRAINAGE CHANNELS, AND ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION



KT ENGINEERING

12500 W. 58TH AVE. #230
ARVADA, CO 80002

P: 720.638.5190

WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/02/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:

COLORADO LICENSED OWEN KEITH KENNEDY 03-05-18 47677 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
OVERALL GRADING AND STORM PLAN

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 50'

SUBMITTED ON:
05/01/2017

08 OF 21

50 0 25 50 100
SCALE: 1"= 50' HORIZ.

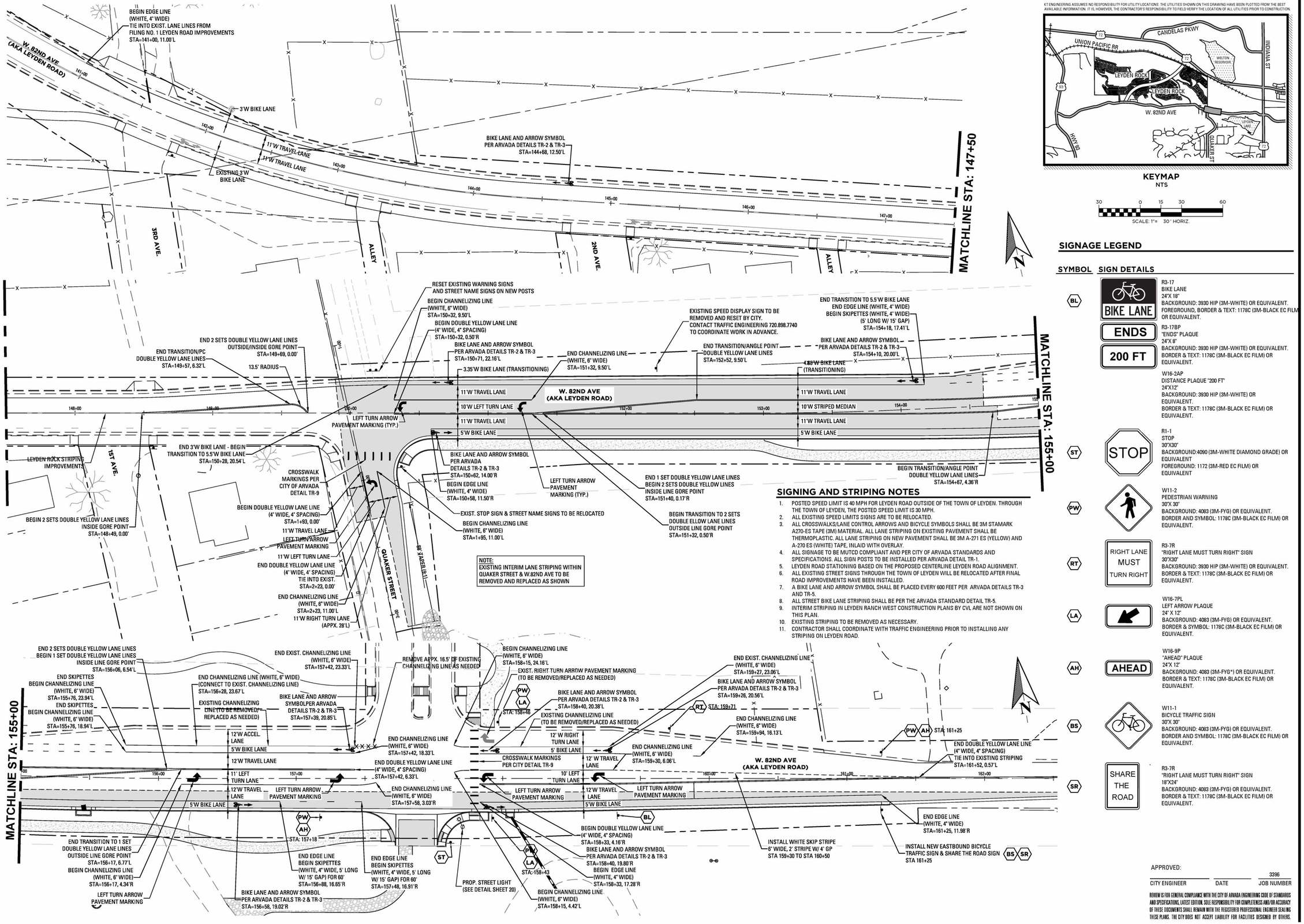
APPROVED:

CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

J:\2018\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-SVBL-SHT-ARVADA.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
NTS

30 0 15 30 60
SCALE: 1"= 30' HORIZ.

SIGNAGE LEGEND

SYMBOL	SIGN DETAILS
BL	R3-17 BIKE LANE 24"X 18" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	R3-17BP "ENDS" PLAQUE 24"X 8" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	W16-2AP DISTANCE PLAQUE "200 FT" 24"X12" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
ST	R1-1 STOP 30"X30" BACKGROUND:4090 (3M-WHITE DIAMOND GRADE) OR EQUIVALENT FOREGROUND: 1172 (3M-RED EC FILM) OR EQUIVALENT
PW	W11-2 PEDESTRIAN WARNING 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
RT	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 30"X30" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
LA	W16-7PL LEFT ARROW PLAQUE 24" X 12" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
AH	W16-9P "AHEAD" PLAQUE 24"X 12" BACKGROUND: 4083 (3M-FYG*) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
BS	W11-1 BICYCLE TRAFFIC SIGN 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
SR	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 18"X24" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.

SIGNING AND STRIPING NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD OUTSIDE OF THE TOWN OF LEYDEN. THROUGH THE TOWN OF LEYDEN, THE POSTED SPEED LIMIT IS 30 MPH.
2. ALL EXISTING SPEED LIMITS SIGNS ARE TO BE RELOCATED.
3. ALL CROSSWALKS/LANE CONTROL ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE THERMOPLASTIC. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND PER CITY OF ARVADA STANDARDS AND SPECIFICATIONS. ALL SIGN POSTS TO BE INSTALLED PER ARVADA DETAIL TR-1.
5. LEYDEN ROAD STATIONING BASED ON THE PROPOSED CENTERLINE LEYDEN ROAD ALIGNMENT.
6. ALL EXISTING STREET SIGNS THROUGH THE TOWN OF LEYDEN WILL BE RELOCATED AFTER FINAL ROAD IMPROVEMENTS HAVE BEEN INSTALLED.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA DETAILS TR-3 AND TR-5.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-5.
9. INTERIM STRIPING IN LEYDEN RANCH WEST CONSTRUCTION PLANS BY CVL ARE NOT SHOWN ON THIS PLAN.
10. EXISTING STRIPING TO BE REMOVED AS NECESSARY.
11. CONTRACTOR SHALL COORDINATE WITH TRAFFIC ENGINEERING PRIOR TO INSTALLING ANY STRIPING ON LEYDEN ROAD.

APPROVED:

CITY ENGINEER DATE 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	09/22/2017	LJL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:
COLORADO LICENSED
OWEN TRUITT KENNEDY
03-05-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
SIGNING AND STRIPING PLAN

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

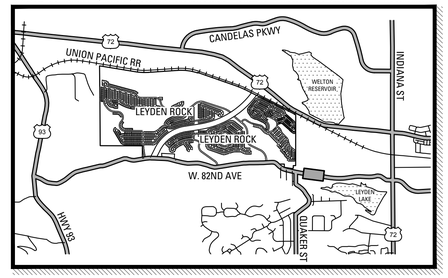
SCALE:
1" = 30'

SUBMITTED ON:
05/01/2017

12 OF 21

J:\2008\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-STRP-ARVADA.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
NTS

W. 82ND AVENUE SOUTH SIDEWALK LINE TABLE

LINE NO.	LENGTH	BEARING
L31	16.14'	N 88°45'21" E
L32	2.29'	S 80°50'44" E

W. 82ND AVENUE SOUTH SIDEWALK CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C32	171.25'	2983.50'	3°17'19"	S 78°54'34" E	171.22'
C33	56.43'	217.00'	14°53'57"	S 73°06'15" E	56.27'
C34	85.31'	191.00'	25°35'22"	S 78°26'58" E	84.60'
C35	34.85'	192.00'	10°23'55"	S 86°02'42" E	34.80'

W. 82ND AVENUE CENTERLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C3	44.78'	2000.00'	1°16'58"	S 80°27'04" E	44.78'

W. 82ND AVENUE CENTERLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L2	171.09'	S 79°48'35" E
L3	691.99'	S 81°05'33" E

W. 82ND AVENUE SOUTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C12	185.41'	2967.00'	3°34'49"	S 79°03'19" E	185.38'

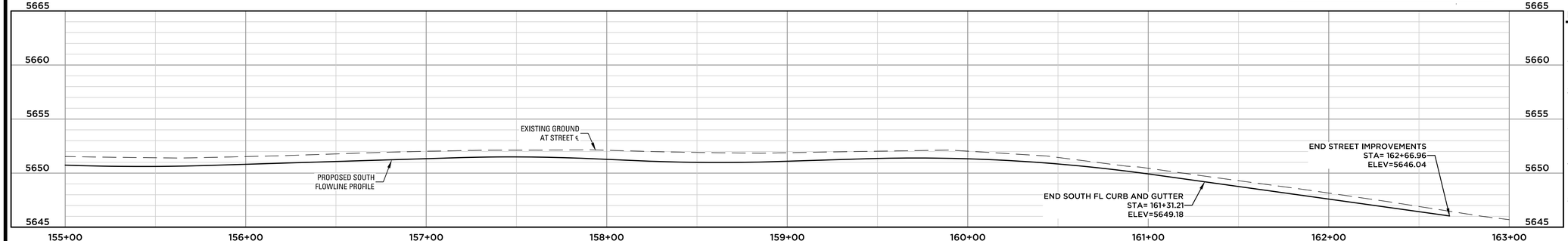
W. 82ND AVENUE SOUTH FLOWLINE LINE TABLE

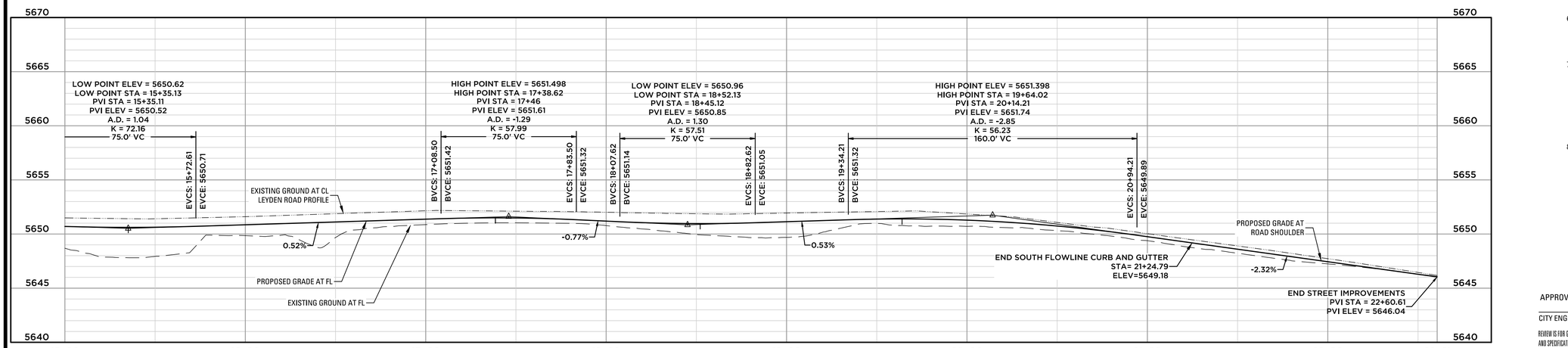
LINE NO.	LENGTH	BEARING
L13	163.71'	S 80°50'44" E
L14	80.00'	S 80°50'44" E
L15	31.45'	S 80°50'48" E
L16	272.32'	S 82°15'20" E
L17	135.82'	S 82°53'55" E

UNLESS SPECIFICALLY LISTED ABOVE, CROSS PAN SHALL BE CONSTRUCTED PER CITY DETAIL ST-8

MODIFIED DEPTH CROSS PAN DETAIL
N.T.S.

LEYDEN ROAD CENTERLINE PLAN & PROFILE





LEYDEN ROAD SOUTH FLOWLINE PROFILE

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FLOWLINE (FL) UNLESS NOTED OTHERWISE.
3. ALL HANDICAP RAMPS SHALL CONFORM TO CURRENT CITY OF ARVADA STANDARDS.
4. CONTRACTOR SHALL COORDINATE ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION.
5. REFER TO SHEET 04 FOR UTILITY NOTES. IT IS ANTICIPATED THAT ADDITIONAL UTILITY LOCATES AND AGENCY COORDINATION WILL BE REQUIRED PRIOR TO CONSTRUCTION.
6. WATER LINE AND UTILITY LINE CROSSINGS/LOWERINGS (IF NEEDED) SHALL BE INSTALLED PER CITY DETAIL W-10 AND W-11.
7. ALL EXISTING MANHOLES, WATER VALVES, WATER APPURTENANCES, GAS APPURTENANCES, WITH ACCESS TO THE EXISTING GROUND SURFACE SHALL BE RAISED/LOWERED TO MAINTAIN ACCESS WITH THE PROPOSED STREET IMPROVEMENTS.
8. ALL EXISTING UTILITY LINES, MANHOLES, WATER VALVES, WATER APPURTENANCES, GAS APPURTENANCES TO REMAIN SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.

APPROVED:

CITY ENGINEER	DATE	3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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PREPARED FOR:
CITY OF ARVADA

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	REVISED PER CITY COMMENTS	08/02/2017	LAL
2.	FOR CONSTRUCTION	12/18/2017	OKK
3.	FIELD REVISION NO.1-GRADING OF WALK & TREE LAWN	03/05/2018	OKK
4.			
5.			
6.			
7.			
8.			

STAMP:



SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS

QUAKER STREET TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 30'

SUBMITTED ON:
05/01/2017

14 OF 21

J:\2016\LEYDEN ROCK\LEYDEN-RBAD-TOWN\CONSTRUCTION\ARVADA SET\1625-LEYDEN-RD-PP-01-ARVADA.dwg

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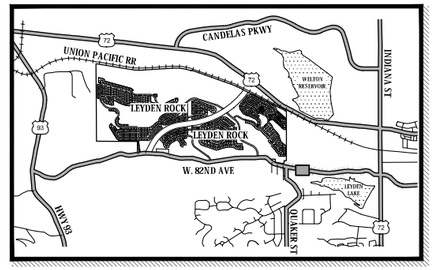
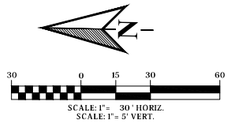
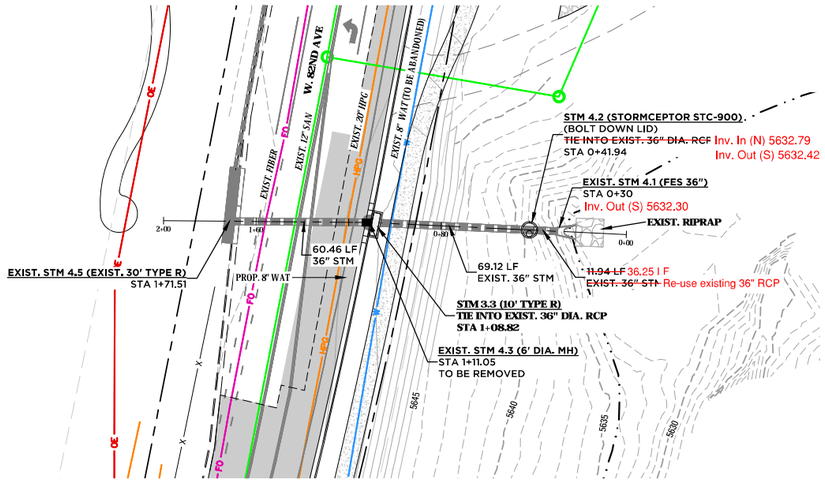
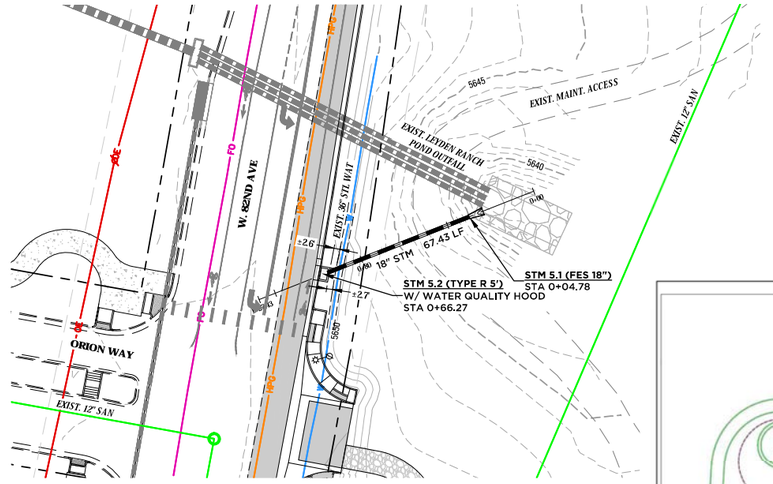


KEYMAP
NTS

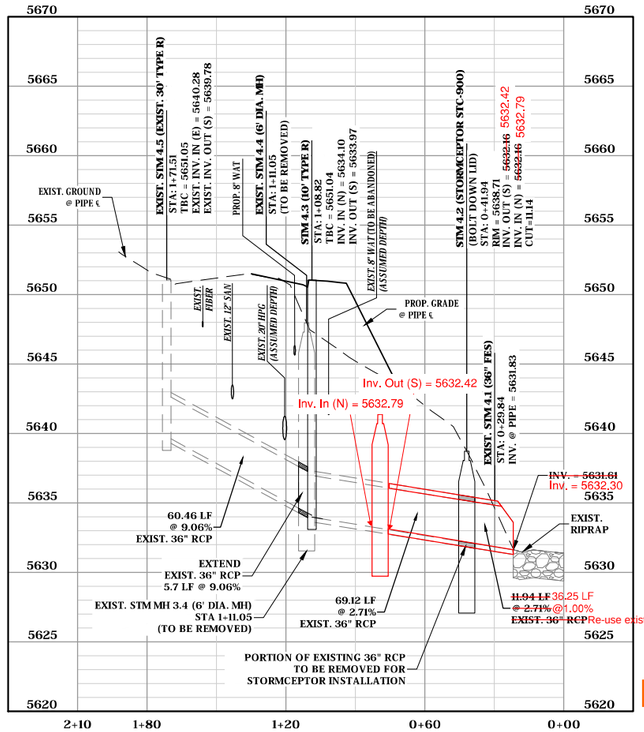




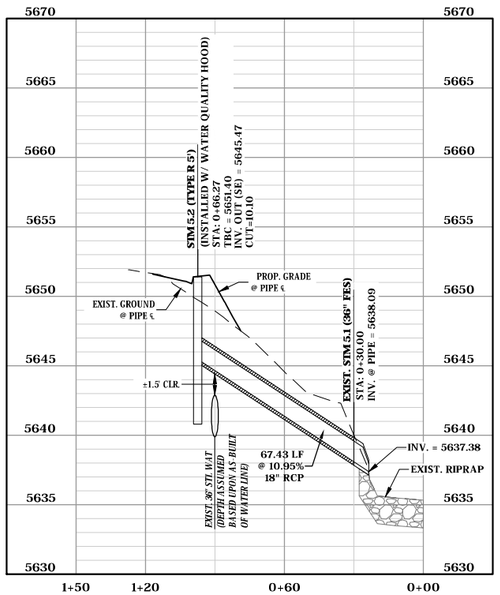
STORM 3 PLAN & PROFILE



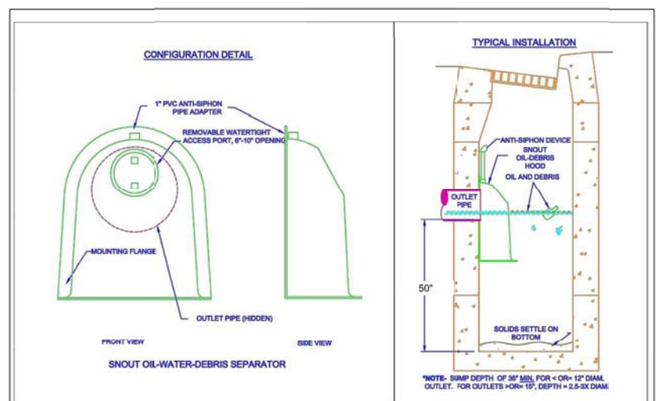
STORM 4 PLAN & PROFILE



NOTE: STORMCEPTOR STC 900 DETAIL IS LOCATED ON SHEET 3A.



AS-BUILT (IN RED) BY CONCRETE EXPRESS, INC.

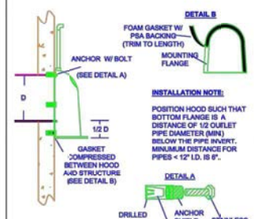


NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER SP-SN	

WATER QUALITY HOOD DETAIL
N.T.S.

APPROVED: _____ _____ 3396
CITY ENGINEER DATE JOB NUMBER

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PREPARED FOR:
CITY OF ARVADA

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1.	REVISED PERCITY COMMENTS	08/22/2017	JJ1
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3.	FIELD REVISIONS NO.1 GRADING OF WALK & TREE LAWN	03/05/2018	OKK
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STAMP:
COLORADO LICENSED
DAVID K. KEMP
03-15-18
47677
PROFESSIONAL ENGINEER

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
QUAKER STREET TO ORION WAY
STORM SEWER PLAN & PROFILE

PROJECT NO:
0010-1625
DRAWN BY:
OKK
DESIGNED BY:
OKK
SCALE:
1" = 30'
SUBMITTED ON:
05/01/2017

19 OF 21

J:\2008\LEYDEN\ROCKYARDS-ROAD-TOWN\CONSTRUCTION\ARVADA SET\0505-STORM-PP-02-ARVADA.dwg

~~CONSTRUCTION PLANS~~ **RECORD DRAWINGS**

LEYDEN ROAD STREET IMPROVEMENTS

LEYDEN ROCK FILING NO. 1 TO ORION WAY

A PORTION OF SECTION 25 AND A PORTION OF SECTION 26
TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M.
CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 27 BEARS N 89°44'54" W AND MONUMENTED AS FOLLOWS:

- THE WEST QUARTER CORNER OF SECTION 27 BEING A FOUND 2" BRASS CAP MARKED "PLS 11434 1999 5881.08" IN 4"X4" SQUARE CONCRETE POST 1.4" BELOW GROUND LEVEL.
- THE CENTER QUARTER CORNER OF SECTION 27 BEING A FOUND NO. 6 REBAR W/ 3.25" ALUMINUM CAP MARKED "PLS 13258 1997" 0.2' ABOVE GROUND LEVEL.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

PUBLIC IMPROVEMENT QUANTITIES

STREET QUANTITIES

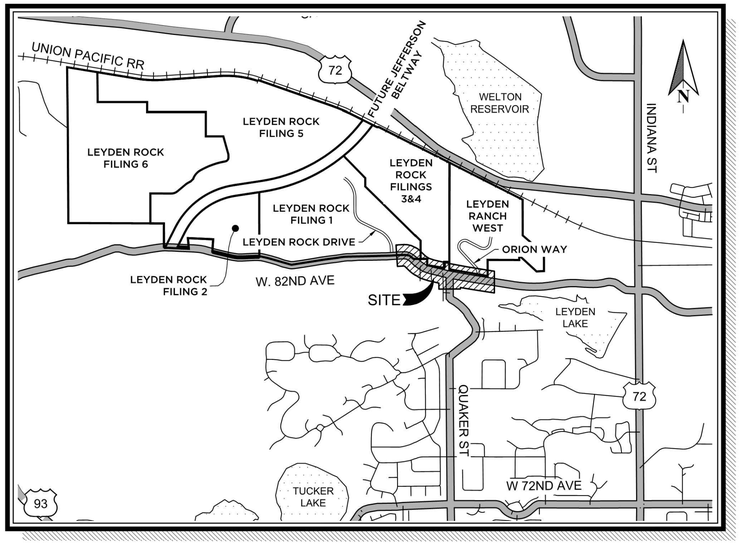
ITEM DESCRIPTION	CENTER LENGTH (LF)	PAVEMENT (SY)	VERTICAL CURB (LF)	SIDEWALK LENGTH (LF)	X-PANS (EA)
LEYDEN ROAD (WEST OF QUAKER)	897	2,864	1,691	1,218	0
LEYDEN ROAD (EAST OF QUAKER - NORTH SIDE)	463	1,253	425	0	0
LEYDEN ROAD (EAST OF QUAKER - SOUTH SIDE	1,270	1,925	1,072	719	1
QUAKER STREET	161	304	107	0	0

STORM SEWER QUANTITIES (LEYDEN ROAD WEST OF QUAKER STREET)

ITEM DESCRIPTION	QUANTITY	UNIT
30" RCP (CLASS III)	140	LF
30" RCP (CLASS IV)	55	LF
24"X38" HERCP (CLASS IV)	49	LF
19"X30" HERCP (CLASS IV)	138	LF
18" RCP (CLASS IV)	44	LF
18" RCP (CLASS III)	350	LF
(4) TYPE 16 INLET	1	EA
(4) TYPE 16 INLET W/ MODIFIED BOX	1	EA
10' TYPE R INLET	1	EA
TYPE C INLET	2	EA
STORMCEPTOR STC-900	1	EA
4' DIA. MANHOLE	4	EA
5' DIA. MANHOLE	2	EA
18" FES	2	EA

STORM SEWER QUANTITIES (LEYDEN ROAD EAST OF QUAKER STREET - SOUTH SIDE)

ITEM DESCRIPTION	QUANTITY	UNIT
36" RCP (CLASS III)	6	LF
18" RCP (CLASS III)	67	LF
5' TYPE R INLET (W/ WQ HOOD)	1	LF
10' TYPE R INLET	1	EA
STORMCEPTOR STC-900	1	EA
REMOVAL OF EXISTING 6' DIA. MANHOLE	1	EA



VICINITY MAP

1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET*
02	GENERAL NOTES SHEET
03	TYPICAL SECTIONS*
03A	TYPICAL SECTIONS AND DETAILS*
04	RIGHT-OF-WAY AND EASEMENTS 1
05	RIGHT-OF-WAY AND EASEMENTS 2
06	DEMOLITION & EXISTING UTILITY PLAN*
06A	OVERALL GRADING AND STORM PLAN*
~~07~~	~~DETAILED UTILITY PLAN~~ (SHEET REMOVED FROM SET)
08	EROSION CONTROL PLAN*
~~09~~	~~EROSION CONTROL PLAN~~ (SHEET REMOVED FROM SET)
10	EROSION CONTROL DETAILS
11	EROSION CONTROL DETAILS
12	SIGNING AND STRIPING PLAN*
13	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
14	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
15	ROADWAY PLAN AND PROFILE - LEYDEN ROAD*
16	ROADWAY PLAN AND PROFILE - QUAKER STREET
17	ROADWAY PLAN AND PROFILE - WEST TRAIL
18	CROSS SECTIONS - LEYDEN ROAD *
19	CROSS SECTIONS - LEYDEN ROAD *
20	CROSS SECTIONS - LEYDEN ROAD *
21	CROSS SECTIONS - LEYDEN ROAD *
22	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
23	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD
24	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
25	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD*
26	STORM SEWER PLAN AND PROFILE - LEYDEN ROAD
27	DETAILS*
*	DENOTES REVISED SHEET BY KT ENGINEERING

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A-100
CENTENNIAL, CO 80112
PHONE: 303-770-9111

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KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: KEN TOLAND, PE

FIRE PROTECTION
ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TIM HOOS, PE

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

- 5400 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- E — EXISTING ELECTRIC UTILITY LINE
- EXISTING UTILITY POLE
- EXISTING ELECTRICAL TRANSFORMER
- G — EXISTING GAS UTILITY LINE
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- 5400 — PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED BOUNDARY LINE
- PROPOSED CENTER LINE
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SETBACK
- 100 LF 8" SAN — PROPOSED SANITARY SEWER LINE
- SS STA: 1+00.00 — PROPOSED SANITARY SEWER SERVICE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UNDERDRAIN
- 100 LF 18" RCP — PROPOSED STORM SEWER LINE
- PROPOSED TYPE R INLET
- PROPOSED TYPE 16 INLET
- PROPOSED BOX BASE MANHOLE
- PROPOSED CIRCULAR MANHOLE
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- 100 LF 8" WAT — PROPOSED WATER LINE
- PROPOSED WATER SERVICE AND METER
- PROPOSED IRRIGATION SERVICE AND METER
- PROPOSED WATER GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED REDUCER
- PROPOSED BLOW-OFF
- PROPOSED BEND W/ THRUST BLOCK
- PROPOSED CROSS
- PROPOSED TEE
- PROPOSED AIR RELEASE VALVE
- PROPOSED PRESSURE REDUCING VALVE
- PROPOSED 100 YR WATER SURFACE ELEVATION
- PROPOSED FLOWLINE SWALE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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ARVADA, CO 80002
P: 720.638.5190
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PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
COVER SHEET

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

01 OF 27

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-CVR.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 11/21/17 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

MAJOR COLLECTOR

LEYDEN ROAD THROUGH TOWN OF LEYDEN (STA 141+00 - 148+27.16)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

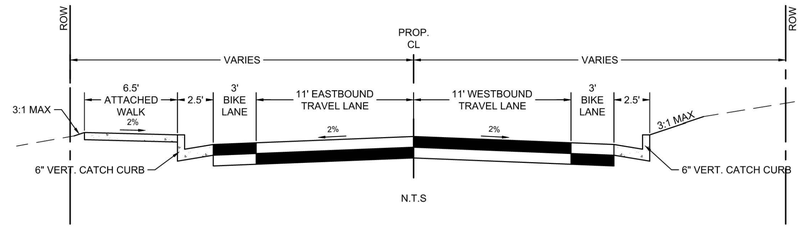
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD THROUGH TOWN OF LEYDEN (STA 148+27.16 - 149+68.96)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

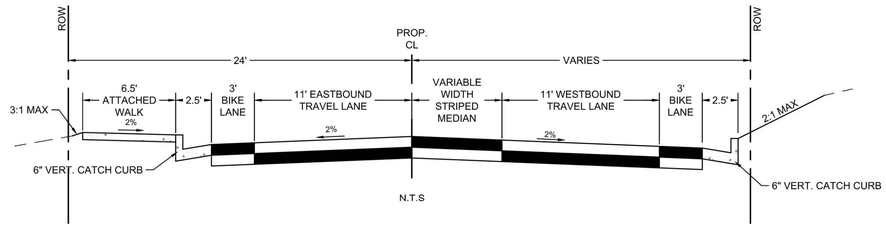
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD EAST OF QUAKER STREET (STA 150+58.46 - 153+00.50)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

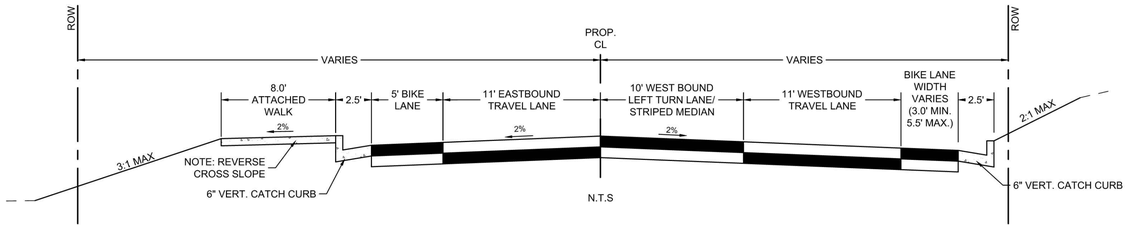
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MAJOR COLLECTOR

LEYDEN ROAD EAST OF QUAKER STREET (STA 153+37.78 - 154+36.07)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	30 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES

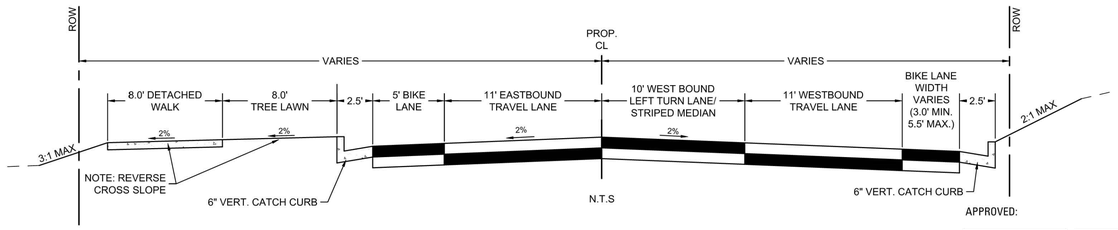
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES

45 MPH DESIGN	MINIMUM
CREST	60
SAG	60



APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
TYPICAL SECTIONS

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

J:\2018\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-TYP-SECT.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

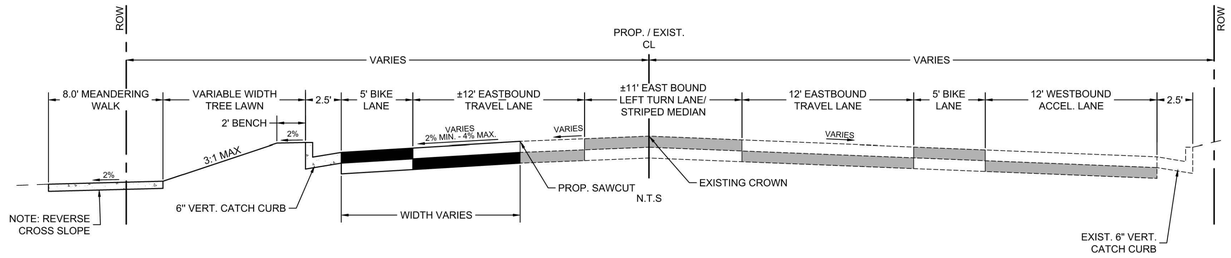
LEYDEN ROAD WEST OF ORION WAY (STA 155+81.39 - 157+32.81)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



MAJOR COLLECTOR

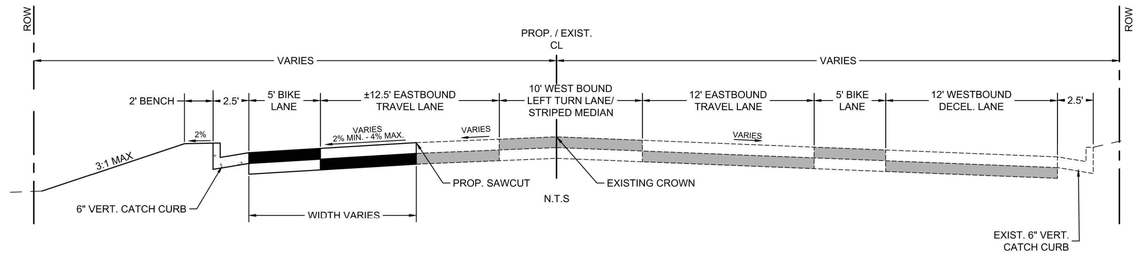
LEYDEN ROAD EAST OF ORION WAY (STA 158+40.02 - 159+30.14)

ROW WIDTH	VARIES
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	100'
MAXIMUM GRADE	7.0%

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	3% FOR 100'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

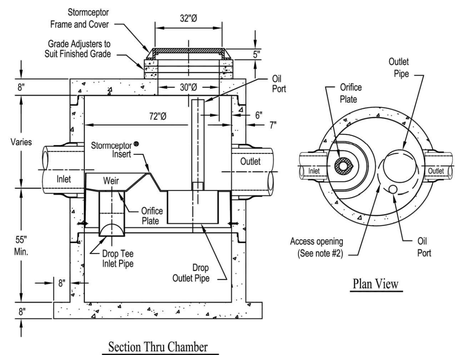
K VALUES	45 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



Rinker MATERIALS

Concrete Pipe Division

STC 900 Precast Concrete Stormceptor ®
(900 U.S. Gallon Capacity)



Section Thru Chamber

Plan View

Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #5753115, #5849181, #6068765, #6371690, #7582216, #7666303.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 028

STORMCEPTOR STC-900 DETAIL
N.T.S.

RECORD DRAWINGS CERTIFICATION STATEMENT:

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

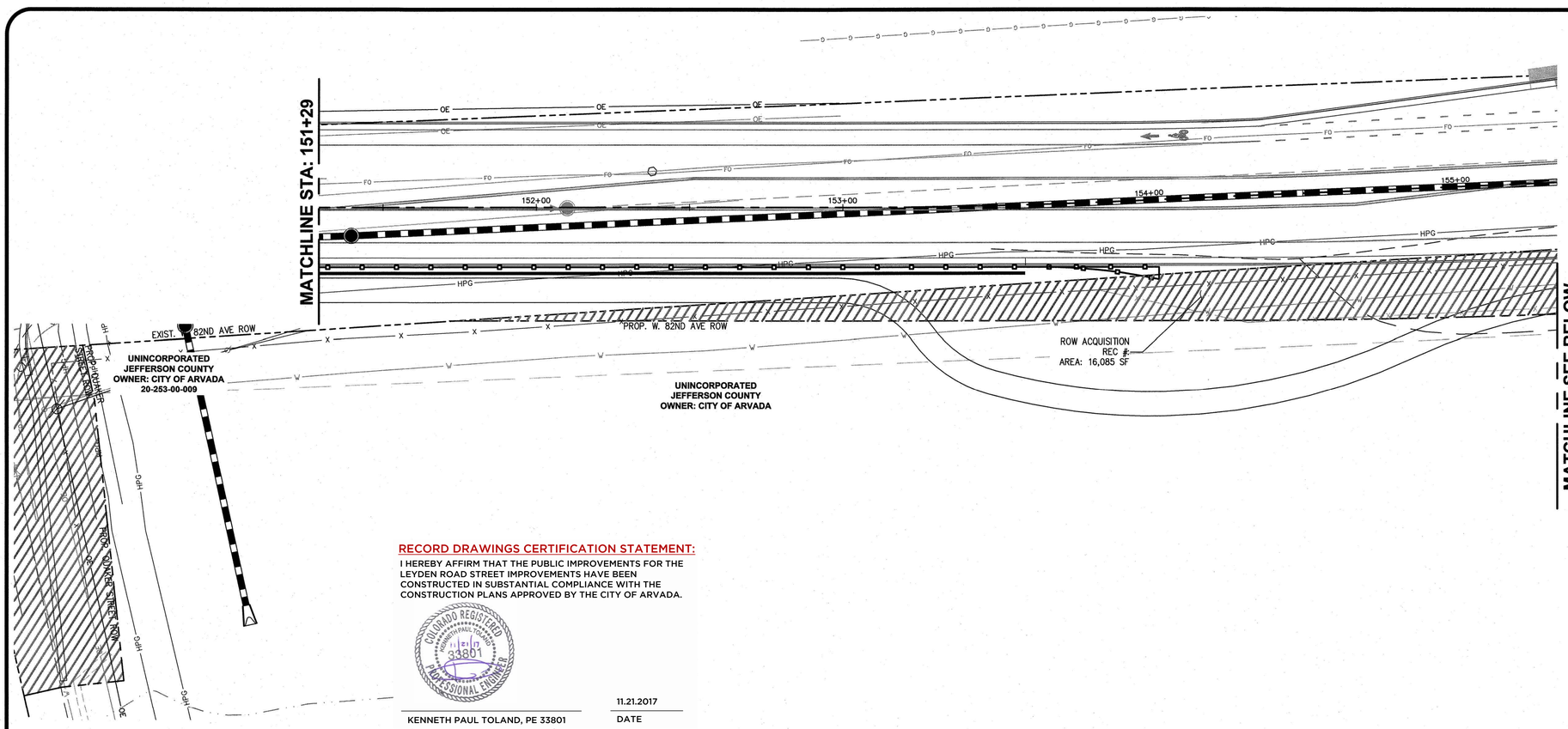
NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

STAMP:

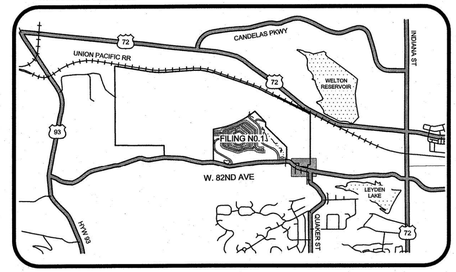
SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
TYPICAL SECTIONS AND DETAILS

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = N/A'
SUBMITTED ON: 04/19/2017

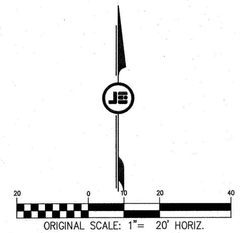
J:\2020\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-TYP-SECT.dwg



JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
N.T.S.



ORIGINAL SCALE: 1"= 20' HORIZ.

LEGEND

- TEMPORARY GRADING AND PERMANENT UTILITY EASEMENT
- ROW ACQUISITION

RECORD DRAWINGS CERTIFICATION STATEMENT:

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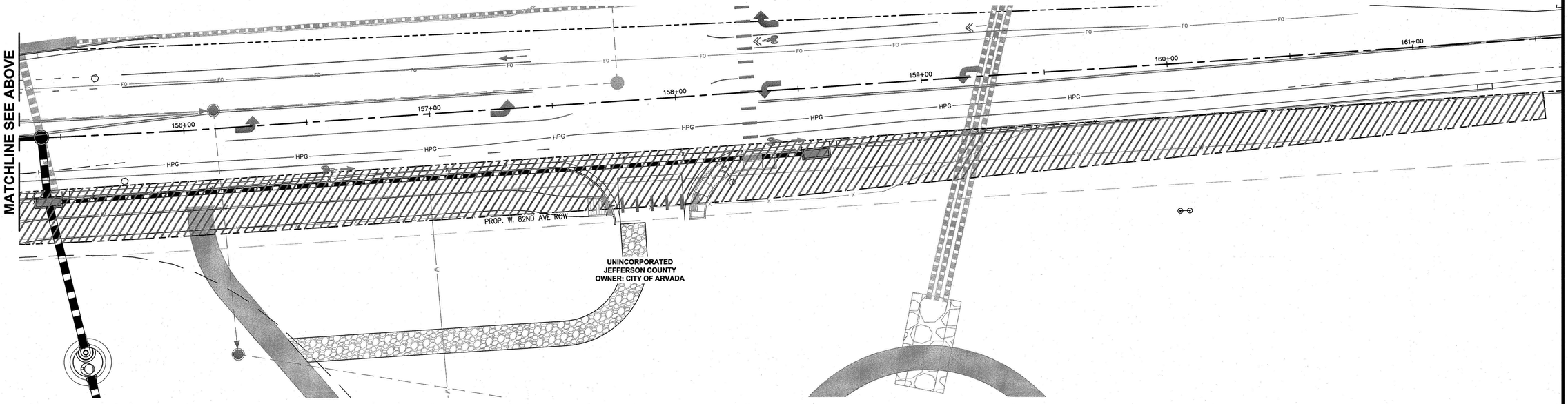
COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
11/21/17
33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE



APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER
MARK F. BISHOP
26988
4/7/15

JEHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
RIGHT OF WAY & EASEMENTS 2

prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 2036-213-110-ROW-OFF-TOWN-LEYDEN-RD.dwg
APPROVED BY:

JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 20'
SHEET NO: 5 OF 27

J:\2036\213-110\CIVIL\CONSTRUCTION\3110-ROW-OFF-TOWN-LEYDEN-RD.dwg

UTILITY LEGEND

W	EXISTING WATER LINE
S	EXISTING SANITARY LINE
FO	EXISTING FIBER OPTIC
HPG	EXISTING HIGH PRESSURE GAS
G	EXISTING GAS
	EXISTING STORM LINE
	PROPOSED STORM LINE

EXISTING UTILITY NOTE

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES WITHIN THE WORK AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR AN DAMAGE AT HIS EXPENSE.

CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED UTILITIES, DRAINAGE CHANNELS, AND ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION

STM 2-2 (4' DIA MH)
STM 2-1 (18" FES)
18" RCP
STM-2 ALIGNMENT (SEE SHEET 23)
CITY OF ARVADA 20-264-06-001
18" RCP
STM 6-3 (10' TYPE R)
STM 2-3 (TYPE C INLET)
NOT CONSTRUCTED AT THIS TIME
RUNOFF DIVERSION CHANNEL (SEE SECTION A-A)
18" RCP
STM-6 ALIGNMENT (SEE SHEET 26)
18" RCP
STM 6-2 (4' DIA MH-FLAT TOP)
STM 6-1 (18" FES)
W. 82ND AVENUE AKA LEYDEN ROAD
ANTHONY F. GUIDA JR. 16805 W. 82ND AVE 20-264-00-003
ELIZABETH D. WIELAND 16595 W. 82ND AVE 20-264-00-002
CITY OF ARVADA 20-264-06-009
HELEN B. SHEPHARD 16455 W. 82ND AVE 20-264-00-001
CITY OF ARVADA 20-274-00-004
NOT CONSTRUCTED AT THIS TIME
FREDERICK J. PATTRIDGE 20-264-00-006
RRCEA, LLC 20-264-00-009
RUNOFF DIVERSION CHANNEL (SEE SECTION B-B)
LEYDEN WATER DISTRICT 8183 3RD AVE 20-264-04-006
3RD AVE
ALLEY
DANIEL M. HAYES 8182 3RD AVE 20-264-99-001
DANIEL M. HAYES 8187 2ND AVE 20-264-03-005
2ND AVE
DANIEL M. HAYES 8186 2ND AVE 20-264-02-010
ALLEY
SHIRLEY A. SNYDER 8175 1ST AVE 20-264-02-009
1ST AVE
TAYLOR MORRISON OF COLORADO, INC. 20-253-00-001
STM 3.8 (TYPE C INLET)
STM 1.6 (5' DIA FLAT TOP MH)
STM 1.7 (4) TYPE 16 (INLET)
STM 3.7 (4' DIA. FLAT TOP MH)
19"X30" HERCP
24"X38" HERCP
STM-3 ALIGNMENT (SEE SHEET 24)
STM 1.5 (4) TYPE 16 INLET W/ MODIFIED BOX)
STM 1.4 (5' DIA FLAT TOP MH)
HAROLD BAKER, PENELOPE BAKER, ET. AL. 8171 QUAKER ST 20-264-01-001
STM 1.3 (4' DIA MH)
STM-1 ALIGNMENT (SEE SHEET 22)
ROAD IMPROVEMENTS WITHIN HATCHED AREA WILL BE AS-BUILT PER THE LEYDEN ROAD STREET IMPROVEMENTS - QUAKER STREET TO ORION WAY PLAN SET.
100-YR FLOODPLAIN PER THE LEYDEN CREEK MAJOR DRAINAGEWAY PLAN DATED OCTOBER 2015
30" RCP
STM 1.2 STORMCEPTOR STC-900
30" RCP
CUT 30" PIPE INTO EXIST. HEADWALL
LEYDEN CREEK
EXIST. 72" CMP
CITY OF ARVADA 20-253-00-009
MATCHLINE SEE BELOW
MATCHLINE ABOVE

2H:1V DAYLIGHT
EXISTING GROUND LINE
4H:1V
1.5'
4H:1V
3H:1V
WIDTH VARIES
6'
1.0'
6'
2'W BENCH

SECTION A-A
N.T.S.

3H:1V DAYLIGHT
EXISTING GROUND LINE
4H:1V
1.5'
4H:1V
2%
WIDTH VARIES
6'
1.5'
6'
4'W BENCH

SECTION B-B
N.T.S.

TAYLOR MORRISON OF COLORADO, INC. 20-253-00-001
EXIST. STM 4.5 (30" TYPE R INLET) (TO REMAIN)
ORION WAY
STM-4 ALIGNMENT (SEE SHEET 25)
EXIST. 36" RCP (TO REMAIN)
EXIST. STM 4.4 (6' DIA MH) (TO BE REMOVED)
TAYLOR MORRISON OF COLORADO, INC. 20-253-10-050
STM 4.3 (10' TYPE R) (PLACE IN LINE W/ EXISTING PIPE)
W. 82ND AVENUE AKA LEYDEN ROAD
EXIST. 18" RCP (TO REMAIN)
STM 4.2 STORMCEPTOR STC-900 (PLACE IN LINE W/ EXISTING PIPE)
STM 5.2 (5' TYPE R INLET)
16" RCP
STM-5 ALIGNMENT (SEE SHEET 25)
EXIST. LEYDEN RANCH WEST POND OUTFALL
EXIST. STM 4.1 (36" FES)
STM 5.1 (18" FES)
TAYLOR MORRISON OF COLORADO, INC. 20-253-10-050
OF ARVADA 253-00-009
ROAD IMPROVEMENTS WITHIN HATCHED AREA WILL BE AS-BUILT PER THE LEYDEN ROAD STREET IMPROVEMENTS - QUAKER STREET TO ORION WAY PLAN SET.

50 0 25 50 100
SCALE: 1"= 50' HORIZ.

N

APPROVED:

CITY ENGINEER | DATE | 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 | 11.21.2017 DATE

J:\2038\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-01\RL-GRD.dwg

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR: LRD INC.

REVISIONS:

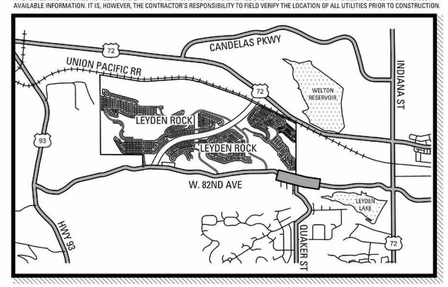
NO.	REVISION DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
OVERALL GRADING AND STORM PLAN

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 50'
SUBMITTED ON: 04/19/2017

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



KEYMAP
NTS

30 0 15 30 60
SCALE: 1"= 30' HORIZ.

SIGNAGE LEGEND

SYMBOL	SIGN DETAILS
BL	R3-17 BIKE LANE 24"X 18" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	R3-17BP "ENDS" PLAQUE 24"X 8" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
	W16-2AP DISTANCE PLAQUE "200 FT" 24"X12" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
ST	R1-1 STOP 30"X30" BACKGROUND:4090 (3M-WHITE DIAMOND GRADE) OR EQUIVALENT FOREGROUND: 1172 (3M-RED EC FILM) OR EQUIVALENT
PW	W11-2 PEDESTRIAN WARNING 30"X 30" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER AND SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
RT	R3-7R "RIGHT LANE MUST TURN RIGHT" SIGN 30"X30" BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
LA	W16-7PL LEFT ARROW PLAQUE 24" X 12" BACKGROUND: 4083 (3M-FYG) OR EQUIVALENT. BORDER & SYMBOL: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.
AH	W16-9P "AHEAD" PLAQUE 24"X 12" BACKGROUND: 4083 (3M-FYG*) OR EQUIVALENT. BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT.

SIGNING AND STRIPING NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD OUTSIDE OF THE TOWN OF LEYDEN. THROUGH THE TOWN OF LEYDEN, THE POSTED SPEED LIMIT IS 30 MPH.
2. ALL EXISTING SPEED LIMITS SIGNS ARE TO BE RELOCATED.
3. ALL CROSSWALKS/LANE CONTROL ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING ON EXISTING PAVEMENT SHALL BE WATER BASED PAINT. ALL LANE STRIPING ON NEW PAVEMENT SHALL BE 3M A-271 ES (YELLOW) AND A-270 ES (WHITE) TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND PER CITY OF ARVADA STANDARDS AND SPECIFICATIONS. ALL SIGN POSTS TO BE INSTALLED PER ARVADA DETAIL TR-1.
5. LEYDEN ROAD STATIONING BASED ON THE PROPOSED CENTERLINE LEYDEN ROAD ALIGNMENT.
6. ALL EXISTING STREET SIGNS THROUGH THE TOWN OF LEYDEN WILL BE RELOCATED AFTER FINAL ROAD IMPROVEMENTS HAVE BEEN INSTALLED.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA DETAILS TR-3 AND TR-5.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-5.
9. INTERIM STRIPING IN LEYDEN RANCH WEST CONSTRUCTION PLANS BY CVL ARE NOT SHOWN ON THIS PLAN.
10. EXISTING STRIPING TO BE REMOVED AS NECESSARY.
11. CONTRACTOR SHALL COORDINATE WITH TRAFFIC ENGINEERING PRIOR TO INSTALLING ANY STRIPING ON LEYDEN ROAD.

RECORD DRAWINGS CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROAD STREET IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

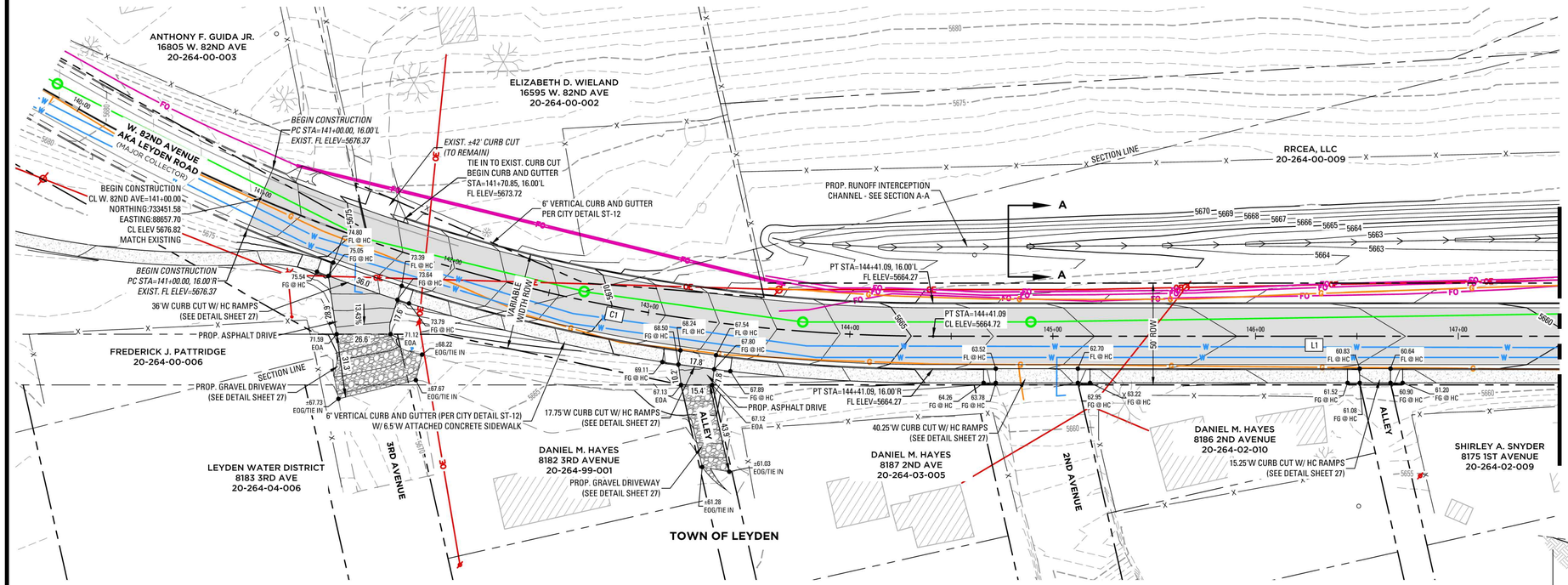
NO.	REVISION DESCRIPTION	DATE	BY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

STAMP:

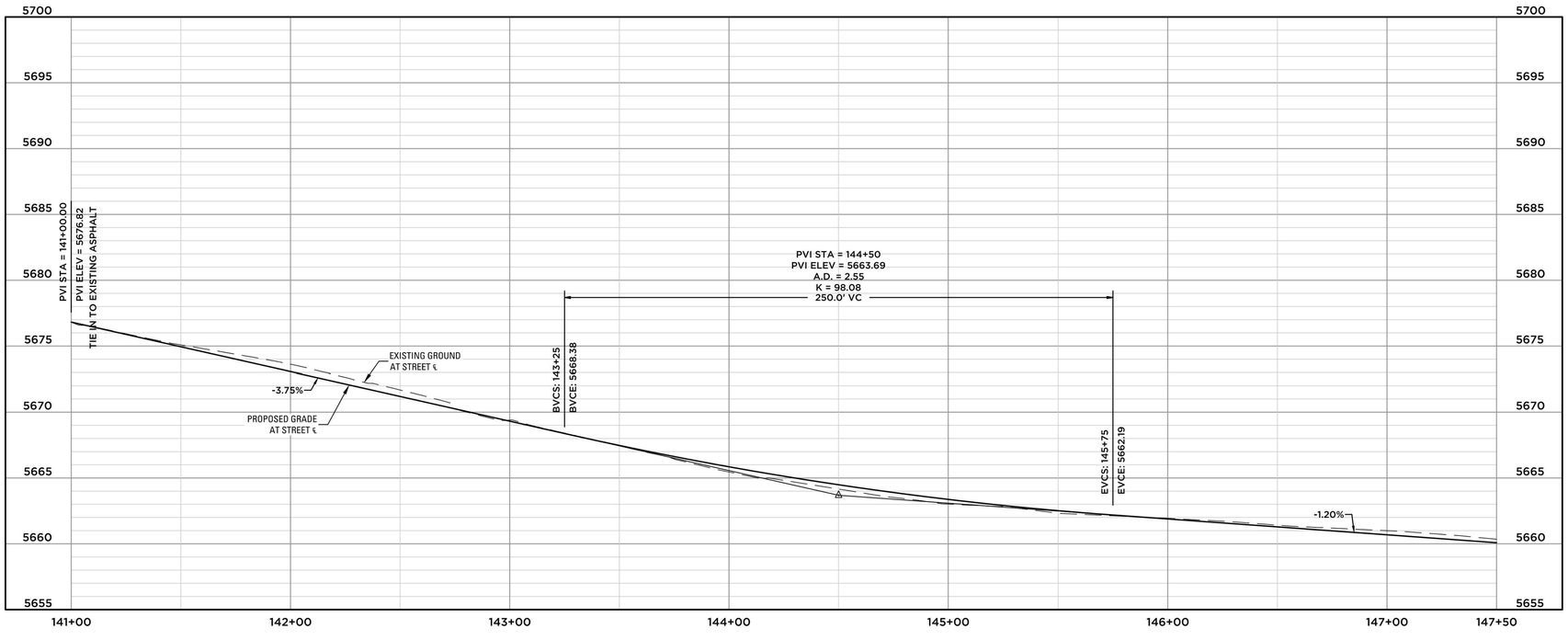
SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
SIGNING AND STRIPING PLAN

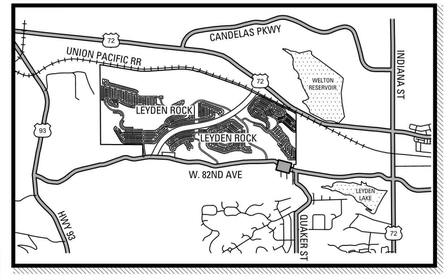
PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

J:\2009\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-STRIP.dwg

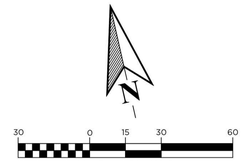


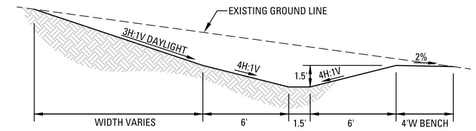
LEYDEN ROAD CENTERLINE PLAN & PROFILE





KEYMAP
NTS





SECTION A-A
N.T.S.

W. 82ND AVENUE CENTERLINE CURVE TABLE					
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	341.09'	850.00'	22°59'30"	S 65°46'09" E	338.81'

W. 82ND AVENUE CENTERLINE LINE TABLE		
LINE NO.	LENGTH	BEARING
L1	862.24'	S 77°15'55" E

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FLOWLINE (FL) UNLESS NOTED OTHERWISE.
3. ALL HANDICAP RAMPS SHALL CONFORM TO CURRENT CITY OF ARVADA STANDARDS.
4. CONTRACTOR SHALL COORDINATE ROAD IMPROVEMENTS WITH XCEL ENERGY PRIOR TO CONSTRUCTION.

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COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO:
0010-1625

DRAWN BY:
OKK

DESIGNED BY:
OKK

SCALE:
1" = 30'

SUBMITTED ON:
04/19/2017

13
OF 27

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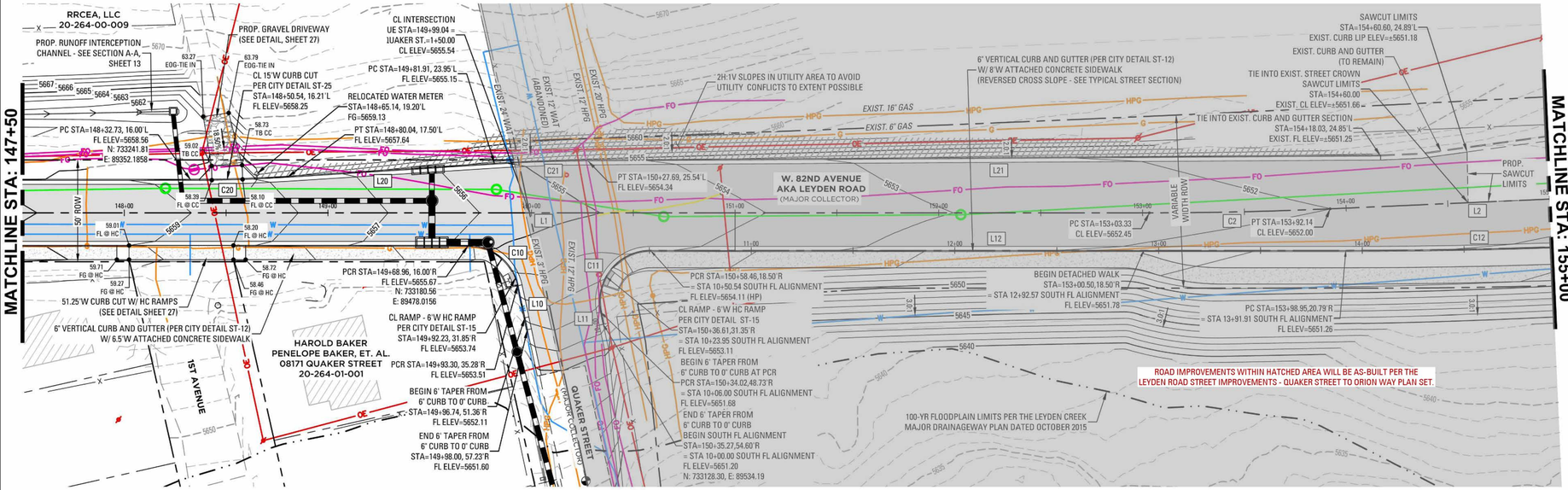

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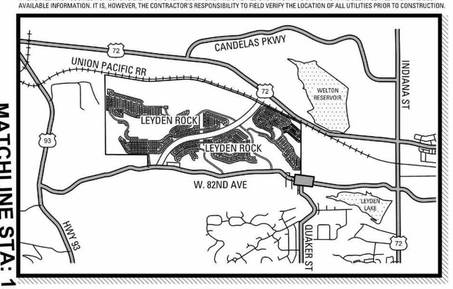

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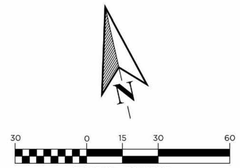
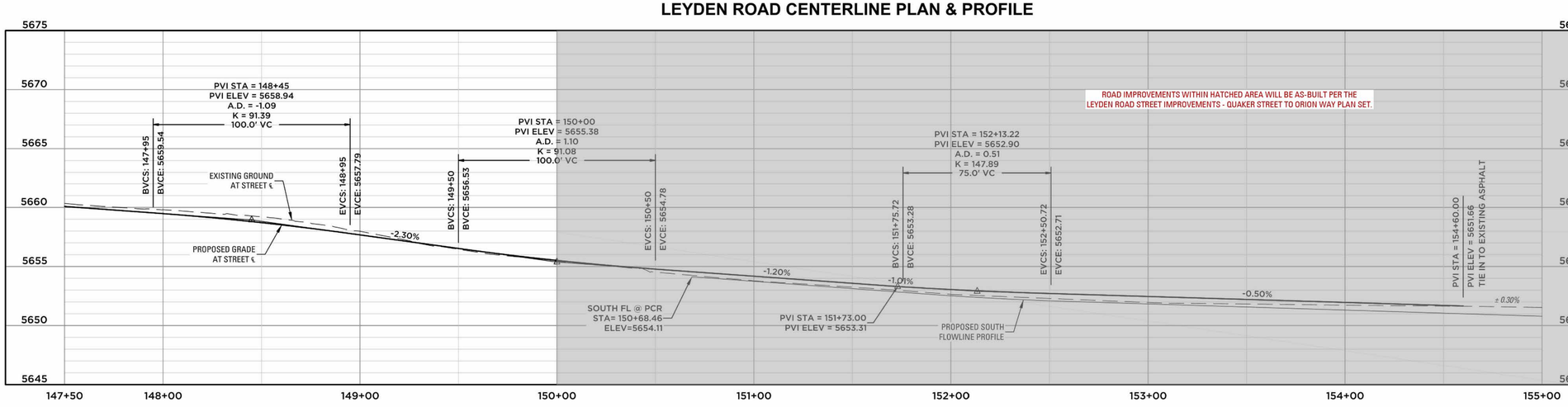
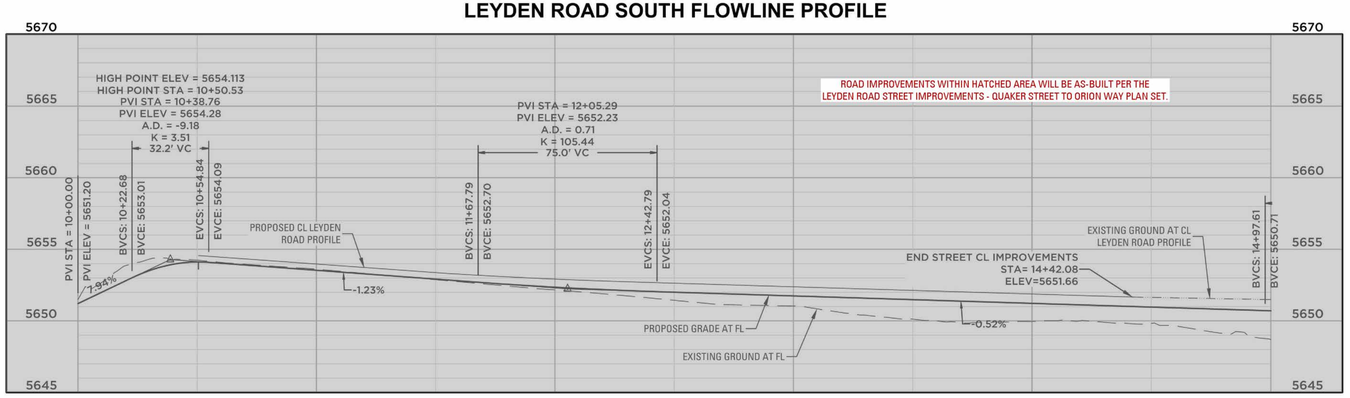


LEYDEN ROAD CENTERLINE PLAN & PROFILE



LEYDEN ROAD SOUTH FLOWLINE PROFILE



NOTES

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COLORADO REGISTERED KENNETH PAUL TOLAND 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

W. 82ND AVENUE CENTERLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C2	88.82'	2000.00'	2°32'40"	S 78°32'15" E	88.81'

W. 82ND AVENUE CENTERLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L1	862.24'	S 77°15'55" E
L2	171.09'	S 79°48'35" E

W. 82ND AVENUE SOUTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C10	33.50'	25.00'	76°46'56"	S 38°52'27" E	31.05'
C11	44.54'	25.00'	102°04'18"	N 51°41'56" E	38.88'
C12	185.41'	2967.00'	3°34'49"	S 79°03'19" E	185.38'

W. 82ND AVENUE SOUTH FLOWLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L10	22.44'	S 00°39'01" W
L11	6.00'	N 00°39'47" E
L12	341.37'	S 77°15'55" E

W. 82ND AVENUE NORTH FLOWLINE CURVE TABLE

CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C20	47.34'	748.00'	03°37'35"	S 79°04'42" E	47.34'
C21	45.81'	802.00'	3°16'23"	S 79°15'19" E	45.81'

W. 82ND AVENUE NORTH FLOWLINE LINE TABLE

LINE NO.	LENGTH	BEARING
L20	102.07'	S 80°53'30" E
L21	389.19'	S 77°37'07" E

APPROVED:

CITY ENGINEER — DATE — 3396 JOB NUMBER

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ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
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5.			
6.			
7.			
8.			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
LEYDEN ROAD - PLAN AND PROFILE

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

J:\2008\LEYDEN ROCK\LEYDEN-ROAD-TOWN\CONSTRUCTION\1625-LEYDEN-RD-PP-01.dwg

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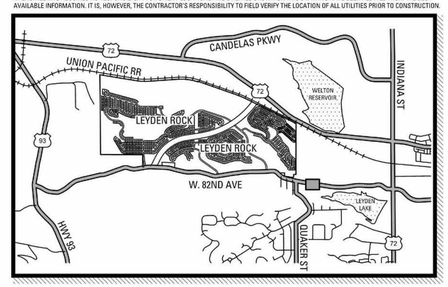

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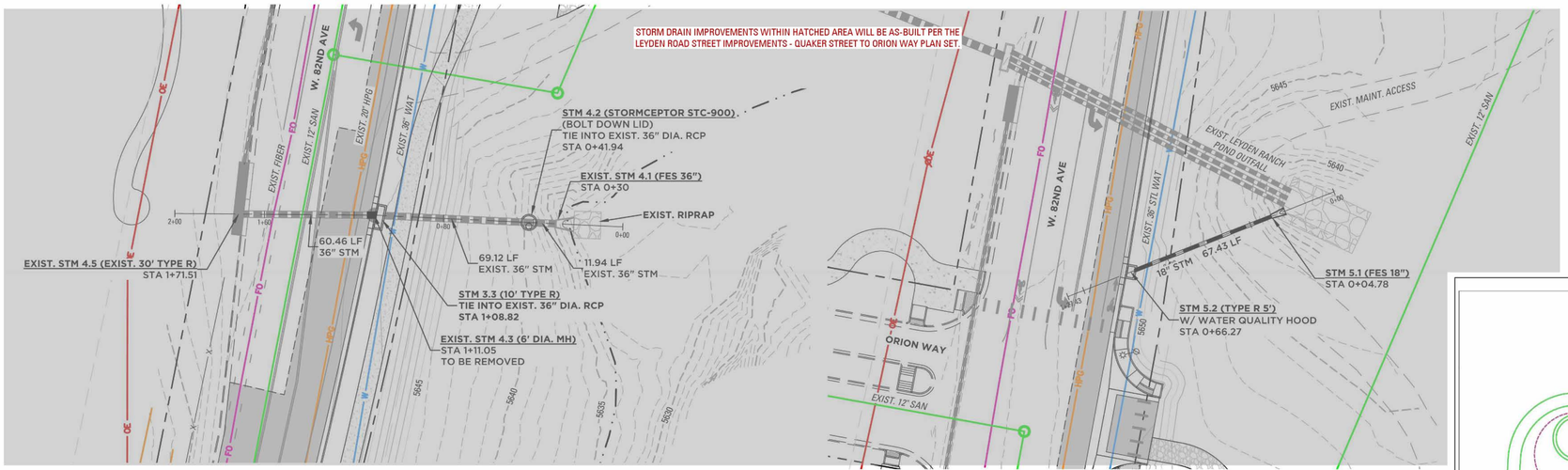
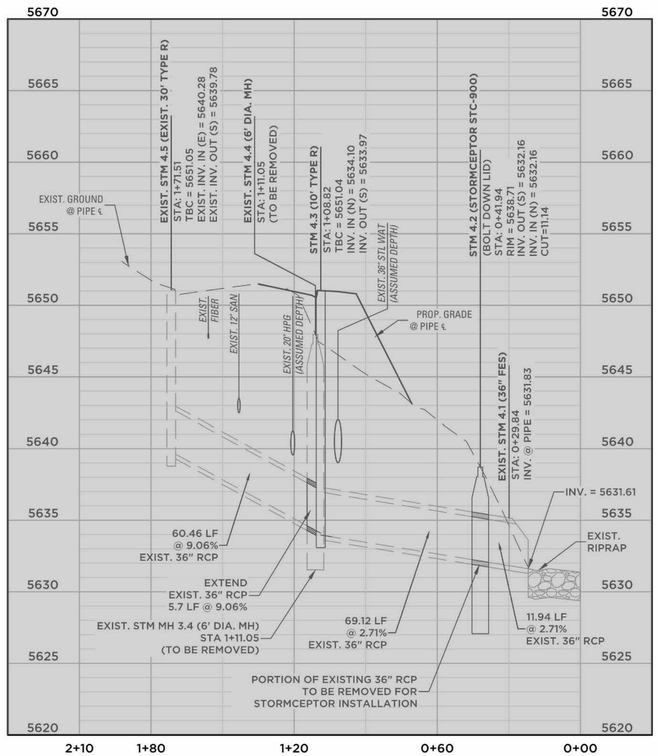
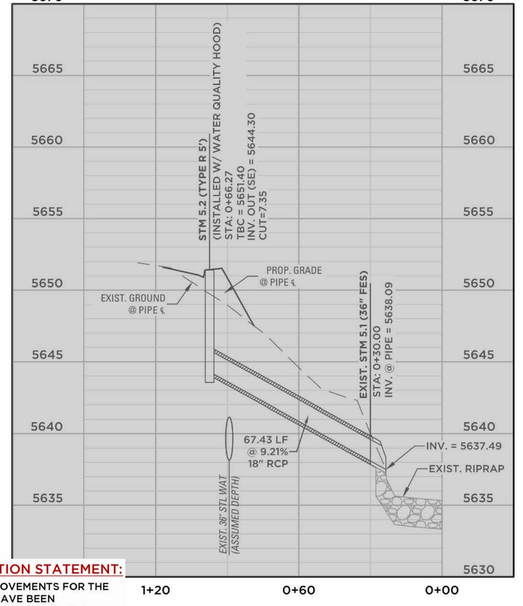


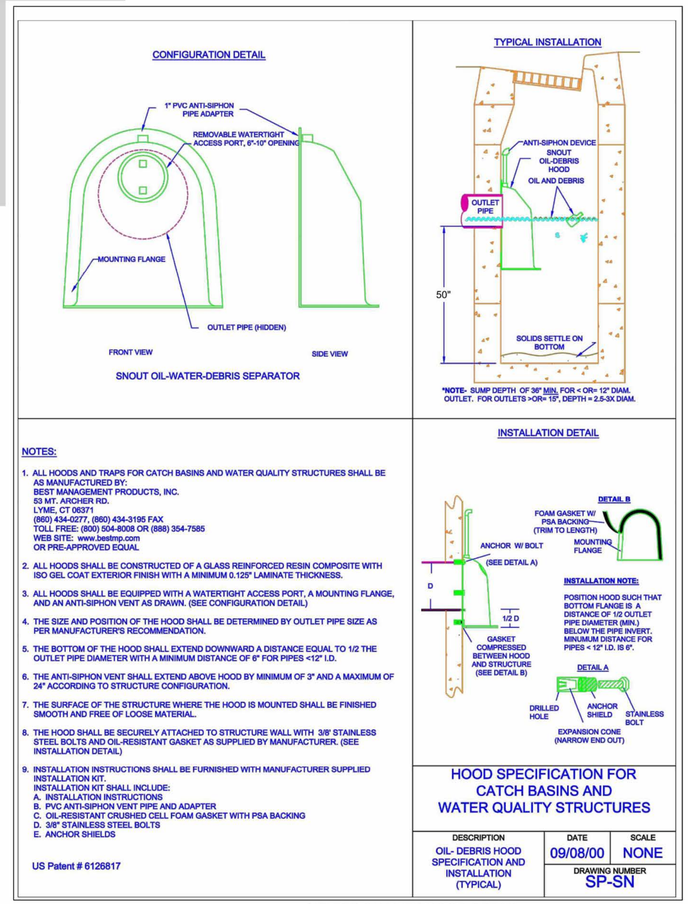
STORM 3 PLAN & PROFILE



NOTE: STORMCEPTOR STC 900 DETAIL IS LOCATED ON SHEET 3A.

STORM 4 PLAN & PROFILE





NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	SP-SN

WATER QUALITY HOOD DETAIL
N.T.S.

RECORD DRAWINGS CERTIFICATION STATEMENT:

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

KENNETH PAUL TOLAND, PE 33801 — 11.21.2017 DATE

APPROVED:

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P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
LRD INC.

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
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8.			

STAMP:

SHEET INFO:
LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
STORM SEWER PLAN & PROFILE

PROJECT NO: 0010-1625
DRAWN BY: OKK
DESIGNED BY: OKK
SCALE: 1" = 30'
SUBMITTED ON: 04/19/2017

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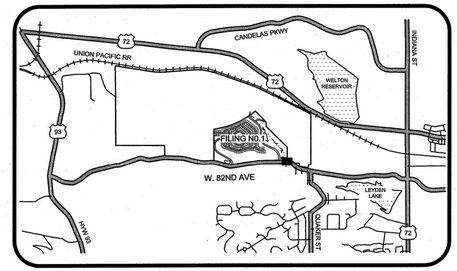
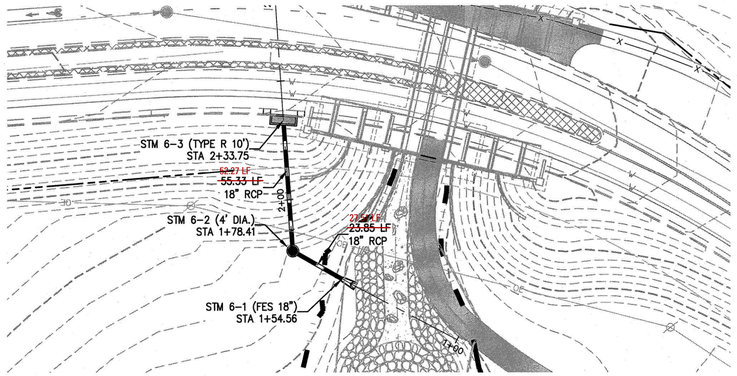
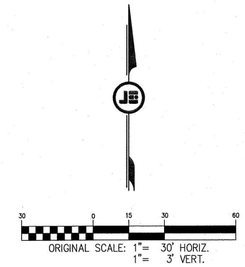
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



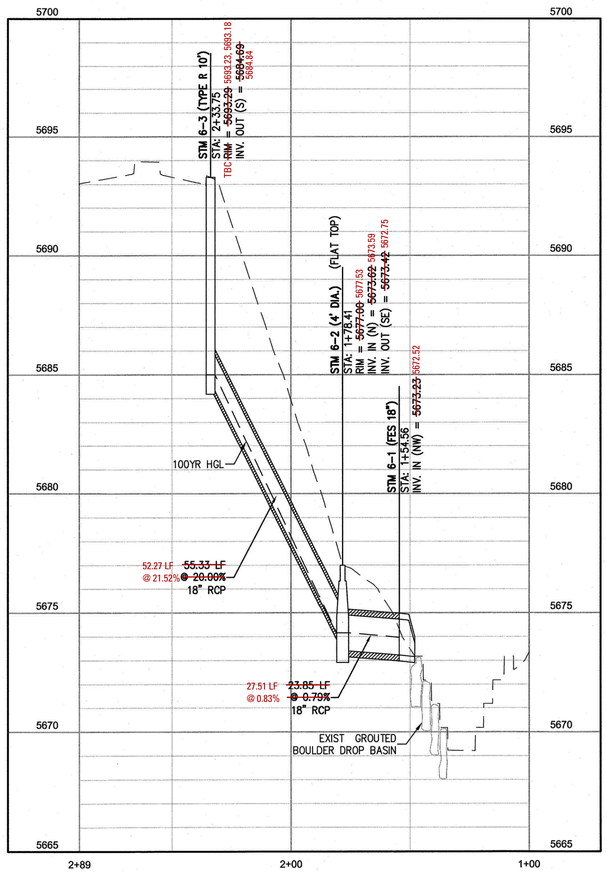
KEYMAP
N.T.S.





ORIGINAL SCALE: 1"= 30' HORIZ.
1"= 3' VERT.

STM-6 PLAN & PROFILE



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SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.iuncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
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REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER
NAME E. BINDING
26988
4/7/15

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 428-8036 FAX: (303) 467-8488

LEYDEN ROAD STREET IMPROVEMENTS
LEYDEN ROCK FILING 1 TO ORION WAY
STORM PLAN AND PROFILE
LEYDEN ROAD 5
prepared for
RRCEA, INC & LEYDEN PROPERTIES, LLC

DRAWN BY: JLS
DESIGNED BY: JLS
DRAWING NAME: 3110-STM-TOL1-2.dwg
APPROVED BY:
JOB NUMBER: 2036-213-110
DATE: 04/02/2015
SCALE: 1" = 30'
SHEET NO: 26 OF 27

J:\2036\213-110\CDR\CONSTRUCTION\3110-STM-TOL1-2.dwg

LEYDEN ROCK

FILING 1 CONSTRUCTION PLANS - AMENDMENT SET

AS-BUILTS

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19, T2S, R69W, 6TH P.M. CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

LEGAL DESCRIPTION:

A PORTION OF WHEAT RIDGE GARDENS 2ND FILING AND A PORTION OF SECTION 26, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE ASSUMPTION THAT THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 26 BEARS N 00°07'27" W AND MONUMENTED AS FOLLOWS:

-THE WEST QUARTER CORNER OF SECTION 26 BEING A 1" O.D. IRON PIPE w/ 3-1/4" ALUMINUM CAP, P.L.S. 13258, 1996.

-THE NORTHWEST CORNER OF SECTION 26 BEING A 1" O.D. IRON PIPE w/ 3-1/4" ALUMINUM CAP, P.L.S. 13155, 1998.

BEGINNING AT THE WEST QUARTER CORNER OF SECTION 26, SAID POINT ALSO BEING ON THE WEST LINE OF THAT PARCEL OF LAND RECORDED AT RECEPTION NUMBER 93184796;

THENCE N 00°07'27" W ALONG THE WEST LINE OF SAID PARCEL OF LAND AND THE WEST LINE OF SAID NORTHWEST QUARTER OF SECTION 26, A DISTANCE OF 886.24 FEET;

THENCE N 81°17'35" E A DISTANCE OF 116.85 FEET TO A POINT OF TANGENT CURVE;

THENCE ALONG THE ARC OF A CURVE TO THE LEFT WITH A RADIUS OF 4650.00 FEET, A CENTRAL ANGLE OF 30°41'03", AN ARC LENGTH OF 2490.26 FEET, THE CHORD OF WHICH BEARS N 65°57'04" E, A DISTANCE OF 2460.61 FEET;

THENCE S 39°23'28" E, A DISTANCE OF 72.00 FEET;

THENCE S 44°13'49" E, A DISTANCE OF 797.08 FEET;

THENCE S 00°06'05" E, A DISTANCE OF 235.26 FEET;

THENCE S 45°27'48" E, A DISTANCE OF 2153.85 FEET;

THENCE S 00°07'34" E A DISTANCE OF 510.84 FEET TO THE NORTHEAST CORNER OF A PARCEL OF LAND RECORDED AT RECEPTION NUMBER 2008057269;

THENCE N 89°59'21" W ALONG THE NORTHERLY LINE OF SAID PARCEL OF LAND A DISTANCE OF 192.09 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF LEYDEN ROAD AS SHOWN AND DESCRIBED ON AN ALTA/ACSM SURVEY RECORDED AT RECEPTION NUMBER 2006091141;

THENCE ALONG SAID SHOWN AND DESCRIBED NORTHERLY RIGHT-OF-WAY LINE OF LEYDEN ROAD THE FOLLOWING THIRTEEN (13) COURSES;

1. N 50°37'02" W A DISTANCE OF 142.60 FEET;
2. N 80°20'50" W A DISTANCE OF 111.05 FEET;
3. S 88°49'37" W A DISTANCE OF 213.40 FEET;
4. S 85°55'05" W A DISTANCE OF 165.62 FEET;
5. S 87°17'34" W A DISTANCE OF 80.21 FEET;
6. S 88°34'48" W A DISTANCE OF 706.38 FEET;
7. S 88°41'35" W A DISTANCE OF 508.25 FEET;
8. S 84°11'05" W A DISTANCE OF 119.15 FEET;
9. S 79°45'40" W A DISTANCE OF 100.50 FEET;
10. S 82°43'02" W A DISTANCE OF 293.16 FEET;
11. S 81°03'36" W A DISTANCE OF 1021.03 FEET;
12. N 74°03'50" W A DISTANCE OF 673.54 FEET;
13. N 77°04'06" W A DISTANCE OF 254.14 TO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 26;

THENCE N 00°08'12" W ALONG THE WEST LINE OF SAID SOUTHWEST QUARTER OF SECTION 26, A DISTANCE OF 900.72 FEET TO THE POINT OF BEGINNING;

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 8,737,714 SQUARE FEET OR 200.5903 ACRES, MORE OR LESS.

BASIS OF BEARING:

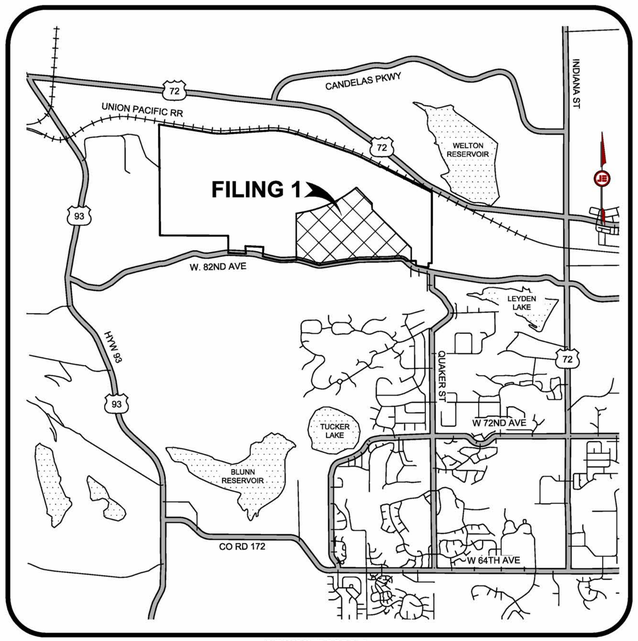
SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 27, TOWNWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M. BEARS N 89 DEGREES 44 MINUTES 54 SECONDS W

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS–DREXEL GROUP ALTA/ACSM SURVEY 7–21–06

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.



VICINITY MAP

NTS

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★★★ ★ 1	COVER SHEET
2	NOTES SHEET
3	TYPICAL SECTIONS
★★ 4	PUBLIC IMPROVEMENT QUANTITIES
★★★ 5	OVERALL UTILITY PLAN
★ 6	OVERALL GRADING PLAN
★ 7	ROAD PHASING PLAN
★★ 8	GRADING AND UTILITY PHASING PLAN
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9	OVERLOT TYPICAL SECTIONS
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★ 11	LOT GRADING 2
12	LOT GRADING 3
13	LOT GRADING 4
14	YULE WAY GRADING
15	TERRY WAY GRADING
	SIGNAGE & STRIPING
16	LEYDEN ROAD
17	LEYDEN ROAD - EAST ENTRANCE INTERSECTION
18	LEYDEN ROAD - WEST ENTRANCE INTERSECTION
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★ 42	VIOLET CT - 3
★ 43	W 64TH PL-1 ~ W 83RD PL -1
★ 44	W 64TH PL -2 ~ W 83RD PL -2
★ 45	WILKERSON ST - 1
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★ AD-2	BARBARA GULCH LOW WATER CROSSING
★ AD-3	SANITARY SEWER PLAN & PROFILE - W. 85TH PL

★ = AMENDED SHEET

*** NUMBER OF ASTERISKS INDICATES NUMBER OF TIMES SHEET HAS BEEN AMENDED.**

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PLANNING CONSULTANT
CONSILIUM DESIGN
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CENTENNIAL, CO 80112
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XCEL ENERGY
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BOULDER, CO, 80301
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CONTACT: RON MORTINEZ

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ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001–0060
PHONE: 303–424–3012
FAX: 303–432–7995
CONTACT: STEVE STEIGLEDER

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT–OF–WAY
	PROPOSED SETBACK
	PROPOSED RIPRAP
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
S	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
100 LF 18" RCP	PROPOSED STORM SEWER LINE
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW–OFF
	PROPOSED GAS WELL HEAD
	PROPOSED WATERLINE PLUG FITTING WITH THRUST BLOCK
	PROPOSED WATERLINE ELBOW FITTING
TYPE C TYPE R	PROPOSED STORM SEWER INLET
	PROPOSED STORM SEWER FLARED END SECTION
	PROPOSED STORM SEWER MANHOLE
1.44 %	SLOPE PERCENTAGE AND DIRECTION

ABBREVIATIONS:

C&G	= CURB & GUTTER
℄ OR CL	= CENTER LINE
(106.2)	= EXISTING ELEVATION
FG	= FINISHED GRADE
℄ FL	= FLOW LINE
GB	= GRADE BREAK
HP	= HIGH POINT
INV	= INVERT ELEVATION
LP	= LOW POINT
ℙ OR PL	= PROPERTY LINE
106.02	= PROPOSED ELEVATION
ROW	= RIGHT–OF–WAY
TOC	= TOP OF CURB
TGB	= TOP OF GROUTED BOULDER
WALK	= FINISHED GRADE WALK
EOC	= EDGE OF CONCRETE
TOW	= TOP OF WALL
BOW	= BOTTOM OF WALL
AP	= ANGLE POINT
ESMT	= EASEMENT
EOA	= EDGE OF ASPHALT
EXIST.	= EXISTING
PROP.	= PROPOSED
HGL	= HYDRAULIC GRADE LINE

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ 3-8-12 3354
CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2–business days in advance before you dig. Dig Safely 1–800–922–1987 www.uncc.org for marking of underground member utilities.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX (303) 467-0438

LEYDEN ROCK FILING 1

COVER SHEET

prepared for RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = NTS'
SHEET NO: 1 OF 119

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AS-BUILTS

TYPE	DESIGN INFORMATION	TYPICAL SECTION

MAJOR COLLECTOR

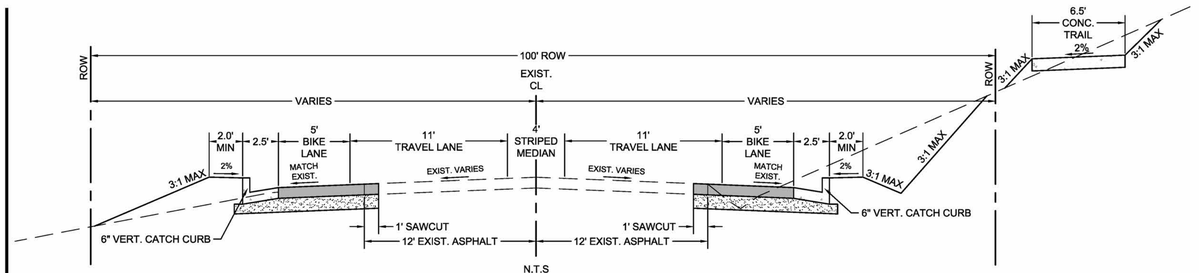
LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	NA	25' / 0.4' MIN FALL	NA

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	80
	SAG	70



NOTE: 1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT EACH LEYDEN ROCK ENTRANCE

MINOR COLLECTOR

(NO PARKING)

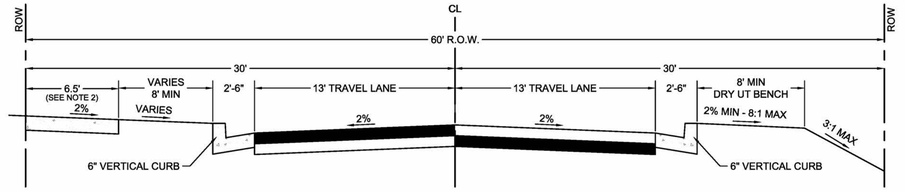
ROADS:
TERRY WAY
YULE WAY
W 84TH AVE

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES	40 MPH DESIGN	MINIMUM
	CREST	60
	SAG	60



NOTE: 1. SIDE IN WHICH WALK IS ON VARIES
2. WALK BECOMES 5' ON BOTH SIDES WHEN ADJACENT TO LOTS.

LOCAL

(PARKING BOTH SIDES)

ROADS:

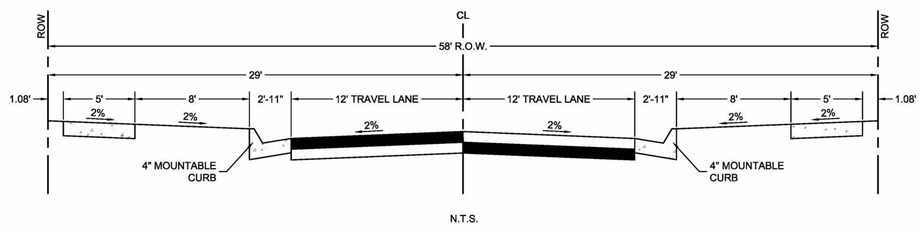
W 83RD PL, W 84TH DR, VIOLET COURT, W 83RD DR, W 84TH PL, WILKERSON CT, VIRGIL ST, WIER ST, W 83RD CR, W 84TH LN & W 85TH PL

ROW WIDTH	58.0'
TRAFFIC VOLUMES	<1000 ADT
POSTED SPEED	25 - 30 MPH
MINIMUM CENTERLINE RADIUS	150.0'
MINIMUM TANGENT BETWEEN CURVES	NA
MAXIMUM GRADE	8.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	4% FOR 35'	4% FOR 100'	4% FOR 200'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	18' / 0.3' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	35 MPH DESIGN	MINIMUM
	CREST	40
	SAG	50



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ 3-8-12 3354
CITY ENGINEER DATE JOB NUMBER

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BAR IS ONE INCH ON ORIGINAL DRAWING
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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED 12-15-14 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-6438

LEYDEN ROCK FILING 1

TYPICAL SECTIONS

prepared for RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: T1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: NTS
SHEET NO: 3 OF 119

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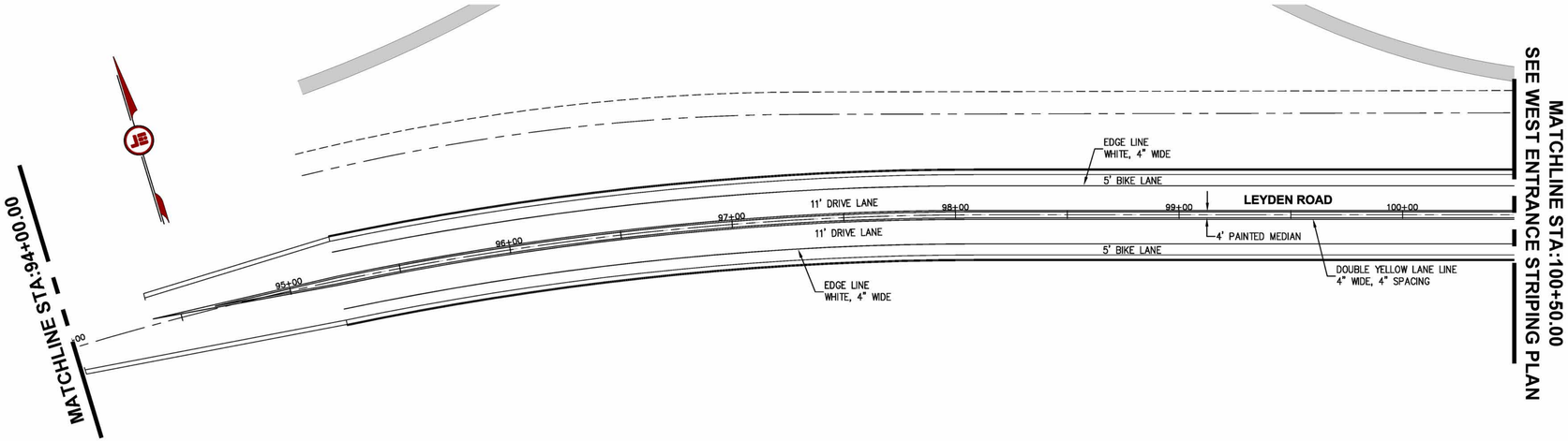
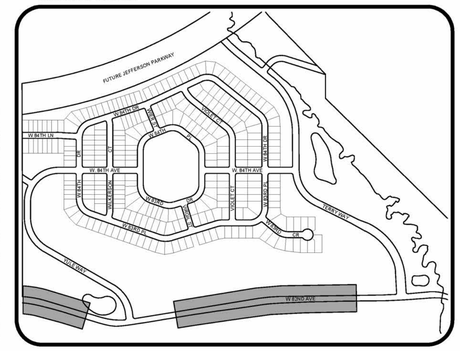
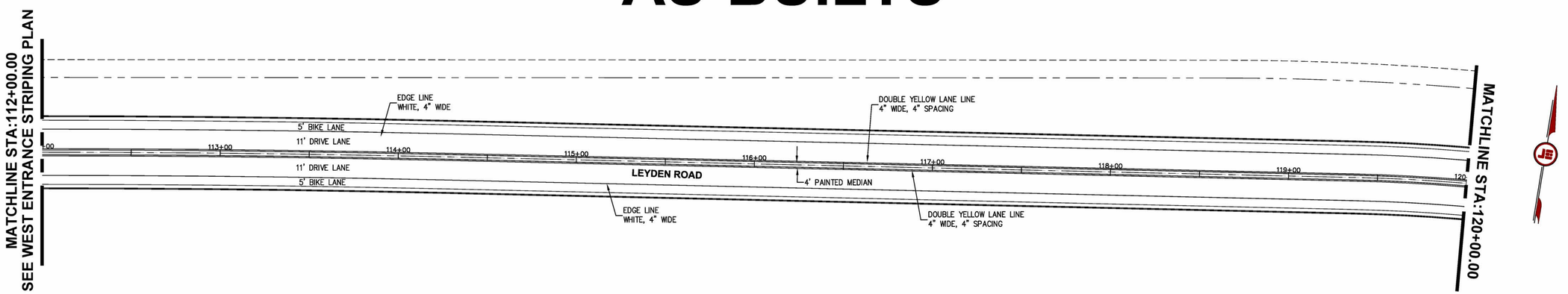
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

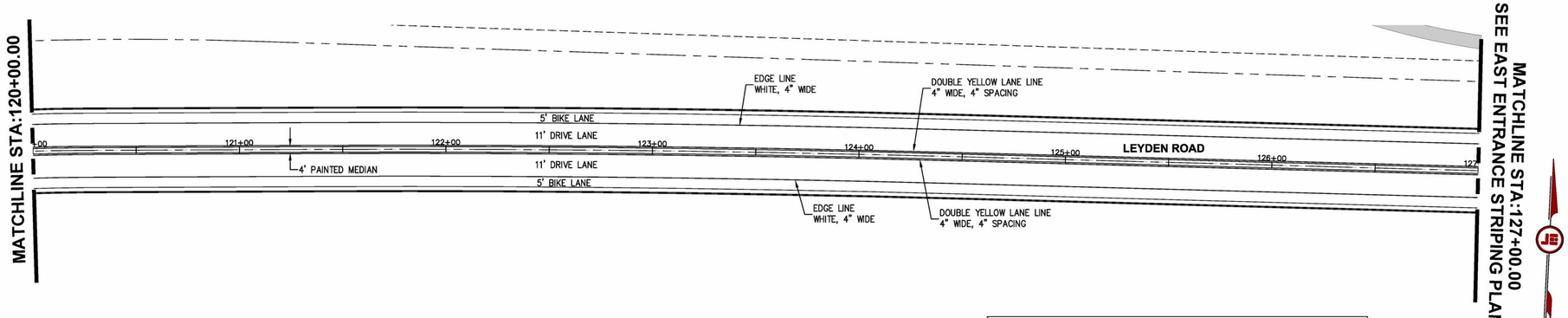




30 0 15 30 60
ORIGINAL SCALE: 1"= 30' HORIZ.

AS-BUILTS





NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL CROSSWALKS/LANE CONTROLLED ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-ES TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
5. LEYDEN STATIONING BASED ON LEYDEN ROAD PROPOSED CL ALIGNMENT. ROAD 'A' STATIONING BASED ON ROAD 'A' PROPOSED CL ALIGNMENT.
6. ALL BICYCLE SYMBOLS AND BICYCLE ARROWS SHALL BE TO ARVADA'S SPECIFICATIONS AS SHOWN IN CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS DRAWING TR-2 THROUGH TR-7

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

COLORADO LICENSED 26988 PROFESSIONAL ENGINEER 6.12.15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ CITY ENGINEER — 3-8-12 DATE — 3354 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987 www.uncc.org
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REUSE OF DOCUMENT
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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PAU

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD

prepared for
RRCEA, LLC.

DRAWN BY:	OKK
DESIGNED BY:	BSS
DRAWING NAME	F1-ASBUILTS
APPROVED BY:	
JOB NUMBER:	2036-210-054
DATE:	02/17/2012
SCALE:	1" = 30'
SHEET NO:	16 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\16-0054-F1-LR SIGNAGE 81014.dwg, 6/16/2015 11:32:47 AM

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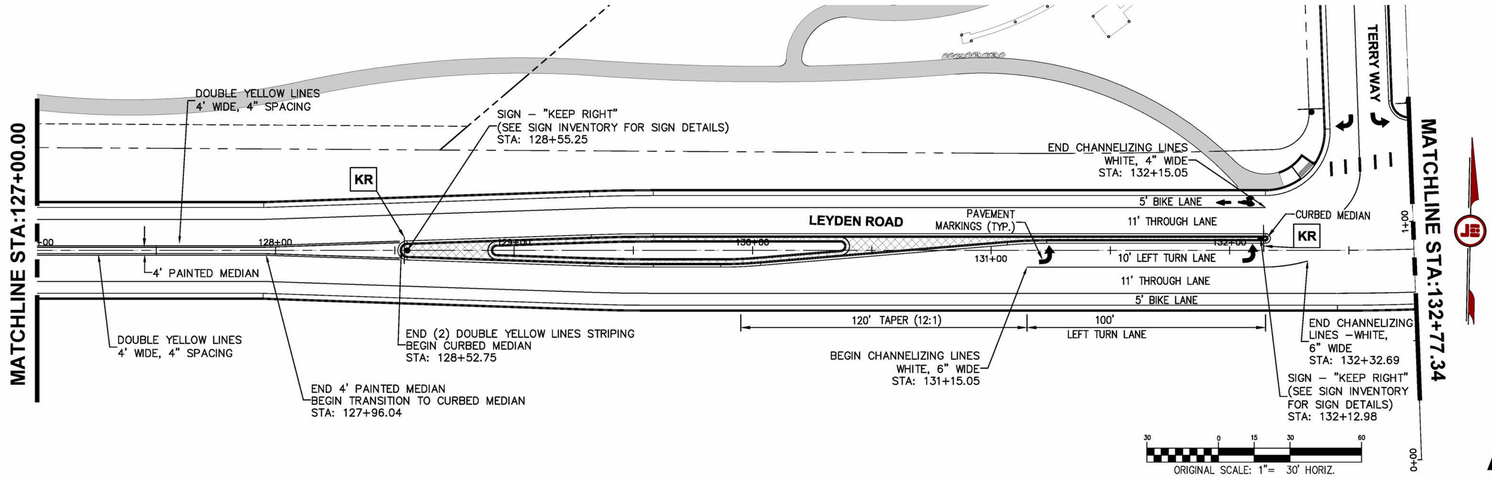
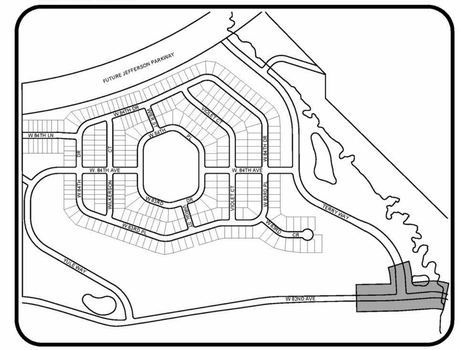
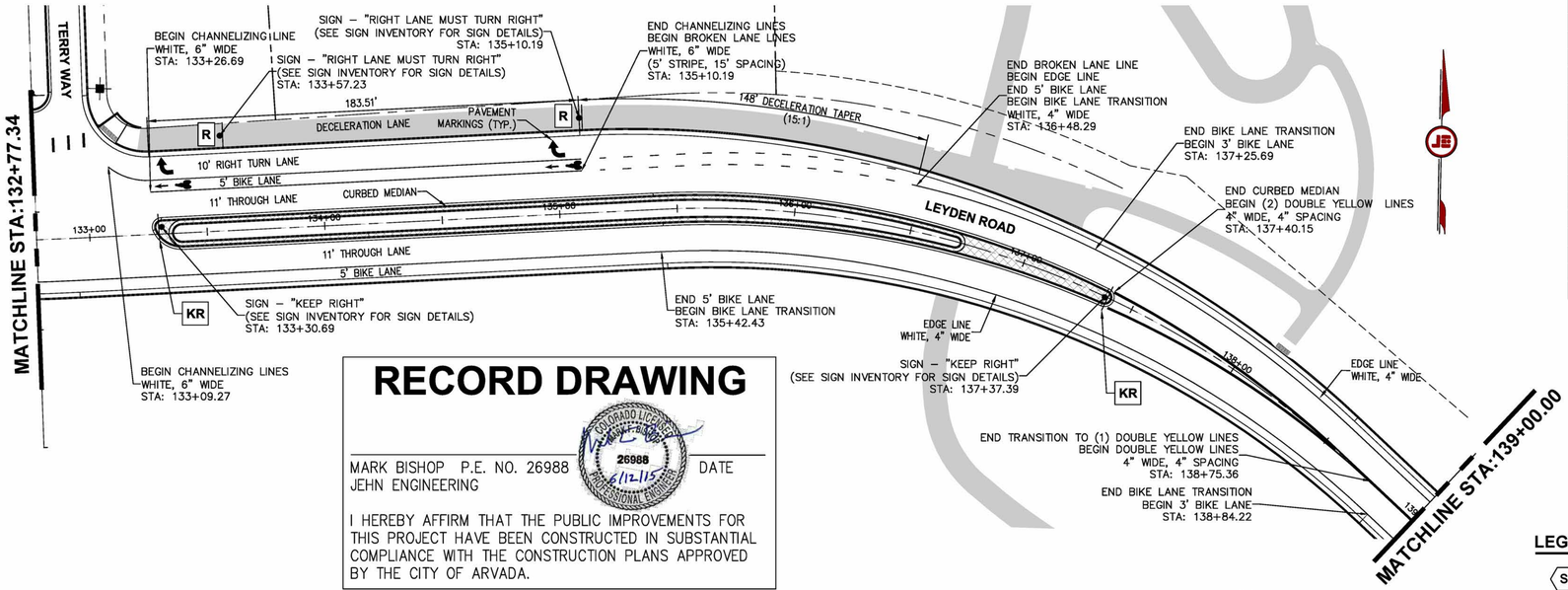




KEYMAP
N.T.S.

AS-BUILTS



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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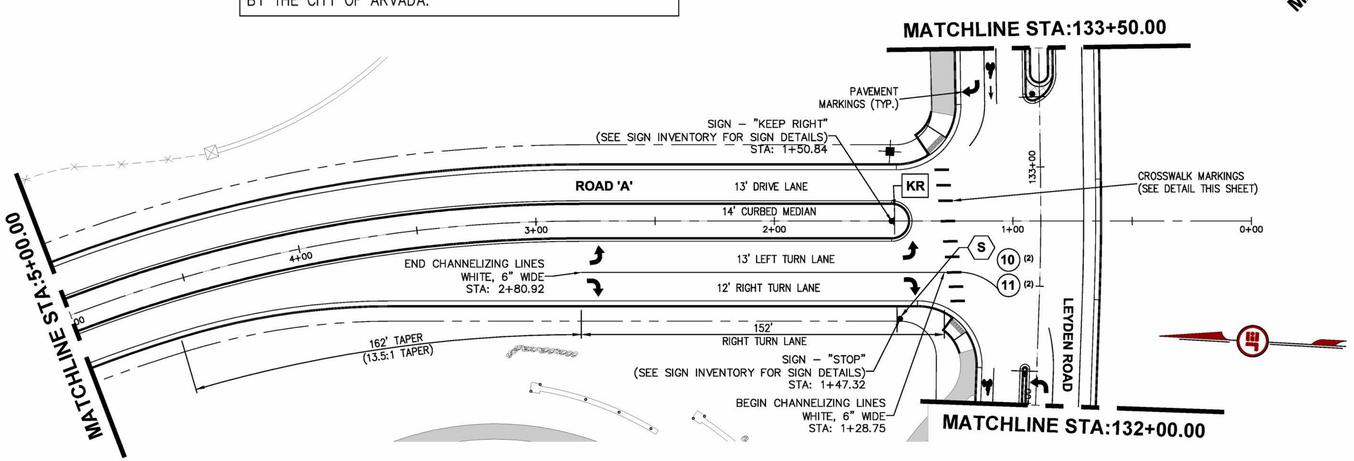


SIGN INVENTORY LIST

ITEM #	QUANTITY OF SIGNS	SIGN DESCRIPTION	CODE #	SIZE
10	4	82ND AVENUE	A-S1-1	-
11	4	TERRY WAY	A-S1-1	-
12	2	YULE WAY	A-S1-1	-
13	24	W 84th AVE	A-S1-1	-
14	16	W 84th DR	A-S1-1	-
15	8	W 83rd PL	A-S1-1	-
16	8	VIOLET CT	A-S1-1	-
17	4	W 83rd DR	A-S1-1	-
18	4	W 84th PL	A-S1-1	-
19	8	WILKERSON CT	A-S1-1	-
20	4	VIRGIL ST	A-S1-1	-
21	4	WIER ST	A-S1-1	-
22	2	W 83rd CR	A-S1-1	-
23	2	W 84th LN	A-S1-1	-
S	23	STOP SIGN	R1-1	30" OCT.
R	4	RIGHT LANE MUST TURN RIGHT	R3-7A	30" x 30"
KR	10	KEEP RIGHT	R4-7	24" x 30"



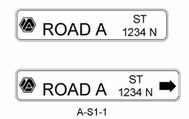
R1-1
STOP



R3-7A
RIGHT LANE MUST TURN RIGHT
(SYMBOL SIGN)
(Arvada Standard)



R4-7
KEEP RIGHT
(SYMBOL SIGN)
(Arvada Standard)



A-S1-1
STREET NAME SIGN
(POST MOUNTED)
(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)

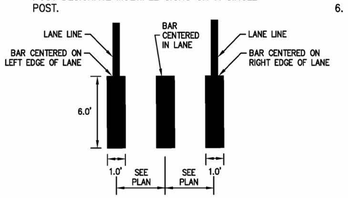
LEGEND

- (S) = PROPOSED STOP SIGN
- (KR) = PROPOSED KEEP RIGHT SIGN
- (R) = PROPOSED RIGHT LANE MUST TURN RIGHT SIGN
- (14) = SINGLE SIGN
- (14)(2) = TWO IDENTICAL SIGNS MOUNTED BACK TO BACK
- = SIGN POST LOCATION*

* MULTIPLE SIGN SYMBOLS ON A SINGLE SIGN POST DESIGNATE MULTIPLE SIGNS ON A SINGLE POST.

NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL CROSSWALKS/LANE CONTROLLED ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270–ES TAPE (3M) MATERIAL. ALL LANE STRIPING SHALL BE 3M STAMARK 270–ES/271–ES TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
5. LEYDEN STATIONING BASED ON LEYDEN ROAD PROPOSED CL ALIGNMENT. ROAD 'A' STATIONING BASED ON ROAD 'A' PROPOSED CL ALIGNMENT.
6. ALL BICYCLE SYMBOLS AND BICYCLE ARROWS SHALL BE TO ARVADA'S SPECIFICATIONS AS SHOWN IN CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS DRAWING TR–2 THROUGH TR–7.



CROSSWALK MARKING DETAILS
N.T.S.

APPROVED: _____ CITY ENGINEER — 3-8-12 DATE — 3354 JOB NUMBER

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	POA

COLORADO REGISTERED ROBERT PAUL BISHOP 21706 3380 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8098 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD - EAST ENTRANCE INTERSECTION
prepared for RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
OKK	BSS	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 30'
SHEET NO: 17 OF 119

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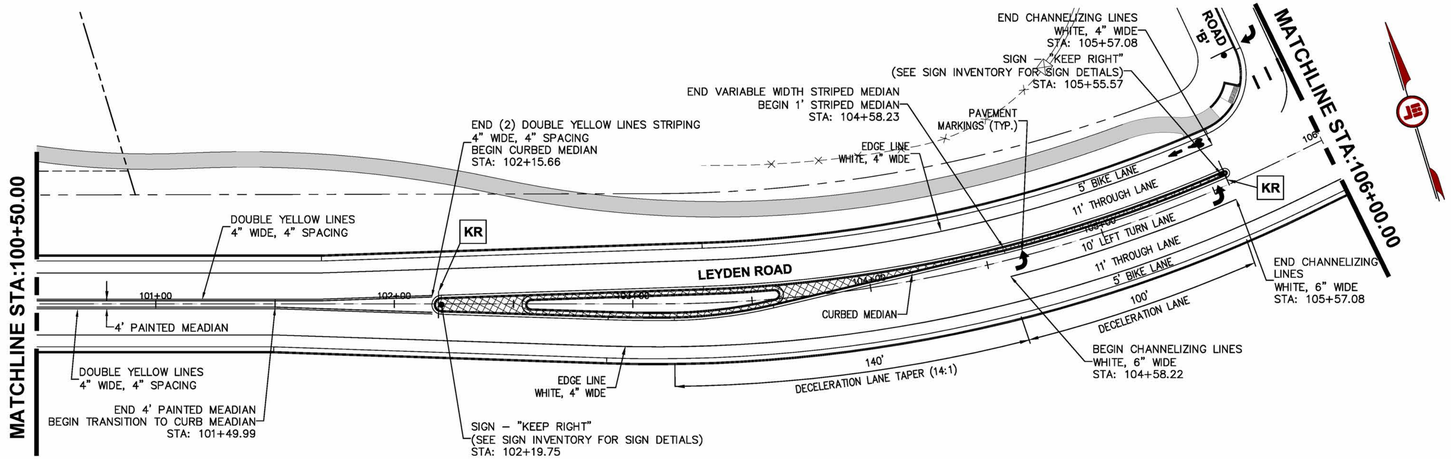
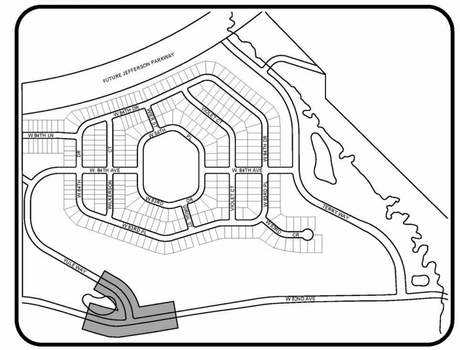
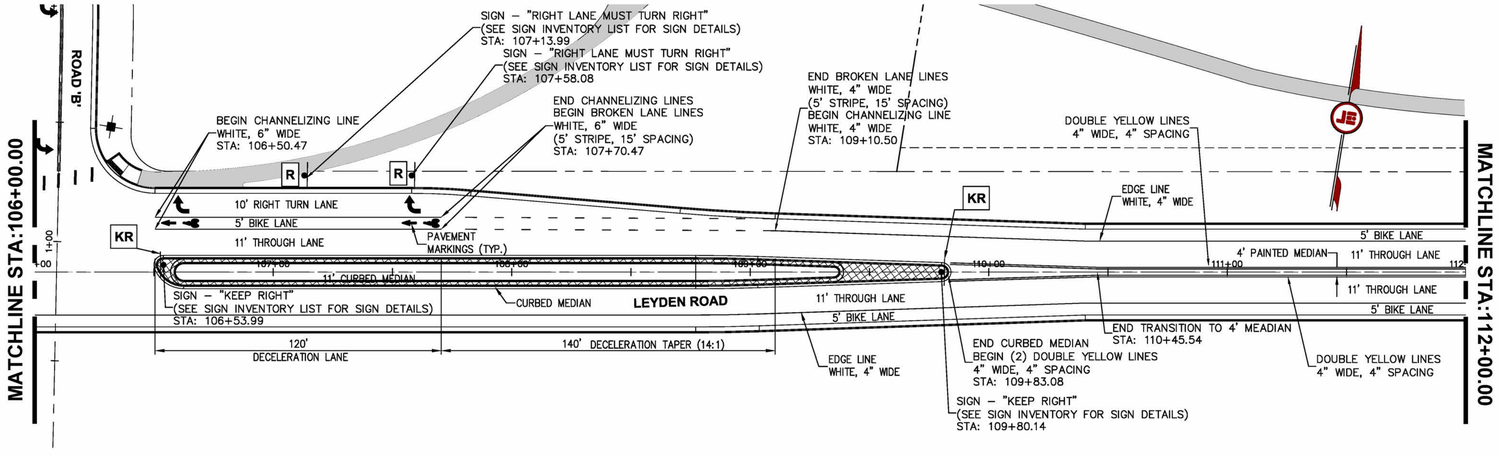


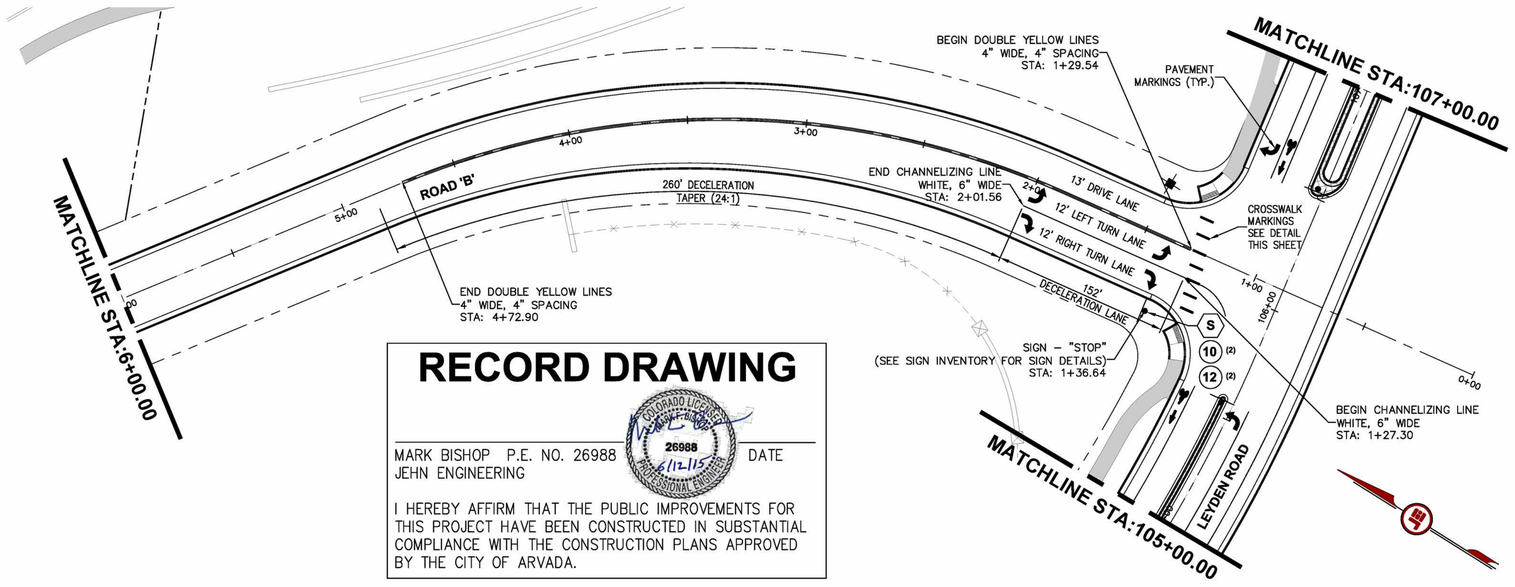


KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 30' HORIZ.

AS-BUILTS





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R3-7A
RIGHT LANE MUST TURN RIGHT
(SYMBOL SIGN)
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R4-7
KEEP RIGHT
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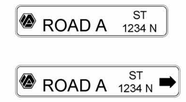
(Arvada Standard)



A-S1-1
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(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)

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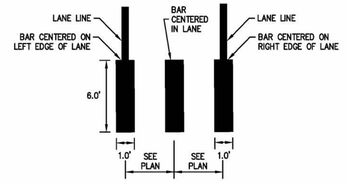

CROSSWALK MARKING DETAILS
N.T.S.

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PNJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 38011

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
SIGNAGE & STRIPING
LEYDEN ROAD - WEST ENTRANCE INTERSECTION

prepared for
RRCEA, LLC.

DRAWN BY:	OKK
DESIGNED BY:	BSS
DRAWING NAME	11-ASBUILTS
APPROVED BY:	
JOB NUMBER:	2036-210-054
DATE:	02/17/2012
SCALE:	1" = 30'
SHEET NO:	18 OF 119

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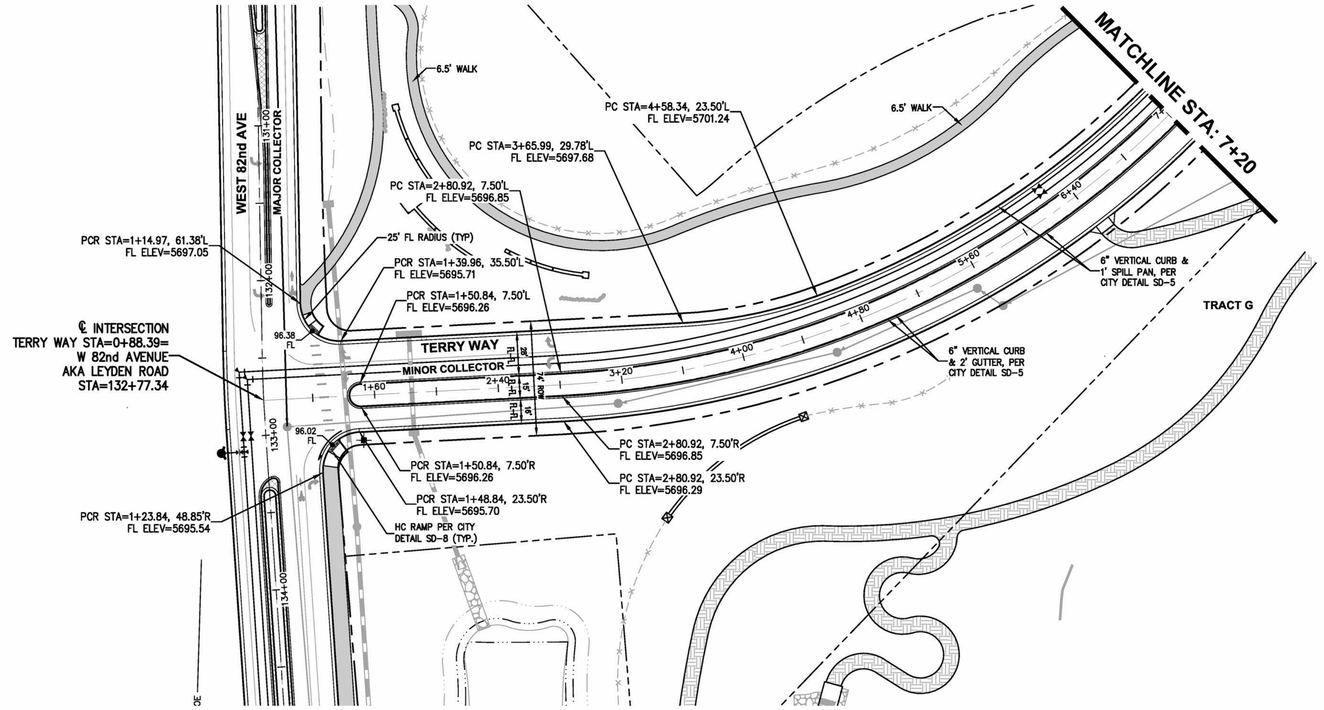
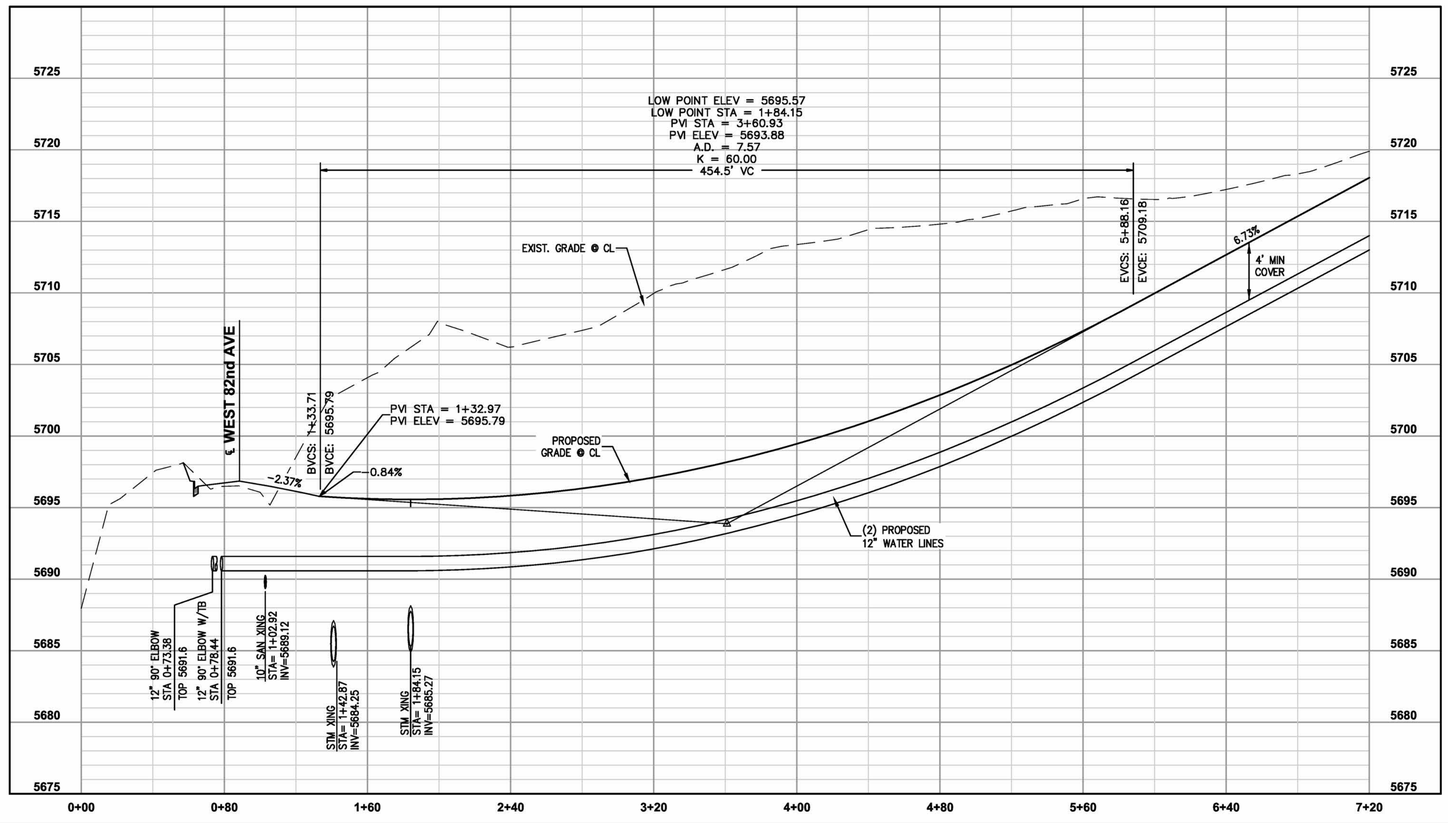


TERRY WAY PLAN AND PROFILE



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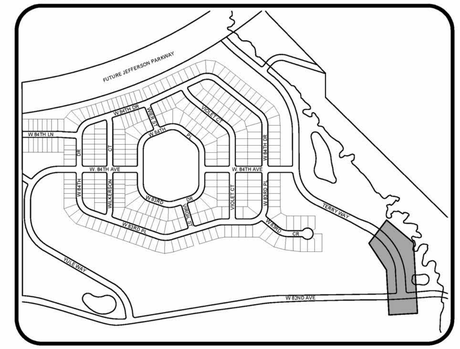

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

COLORADO LICENSED — 26988 — PROFESSIONAL ENGINEER — 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

40 0 20 40 80
ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 20' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED: _____ 8-8-12 3354
CITY ENGINEER — DATE — JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED — 33801 — PROFESSIONAL ENGINEER

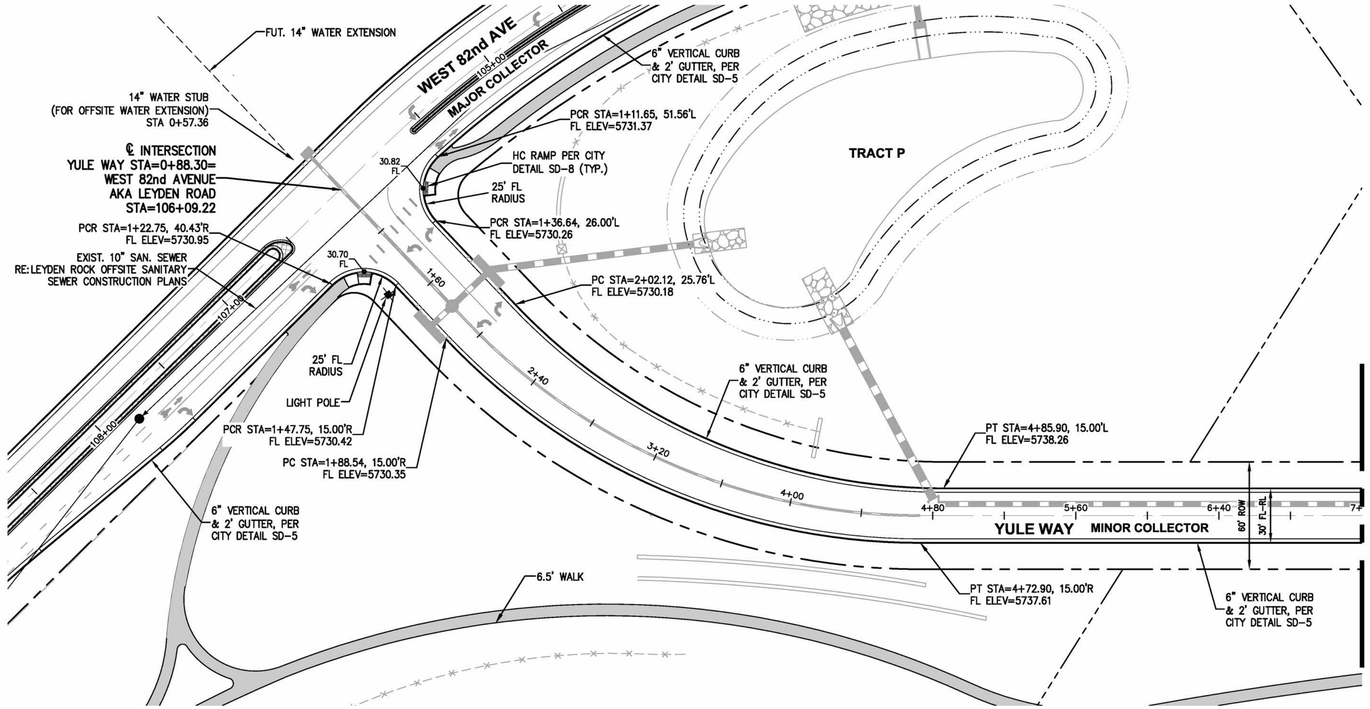
JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
ROAD PLAN & PROFILE
TERRY WAY - 1

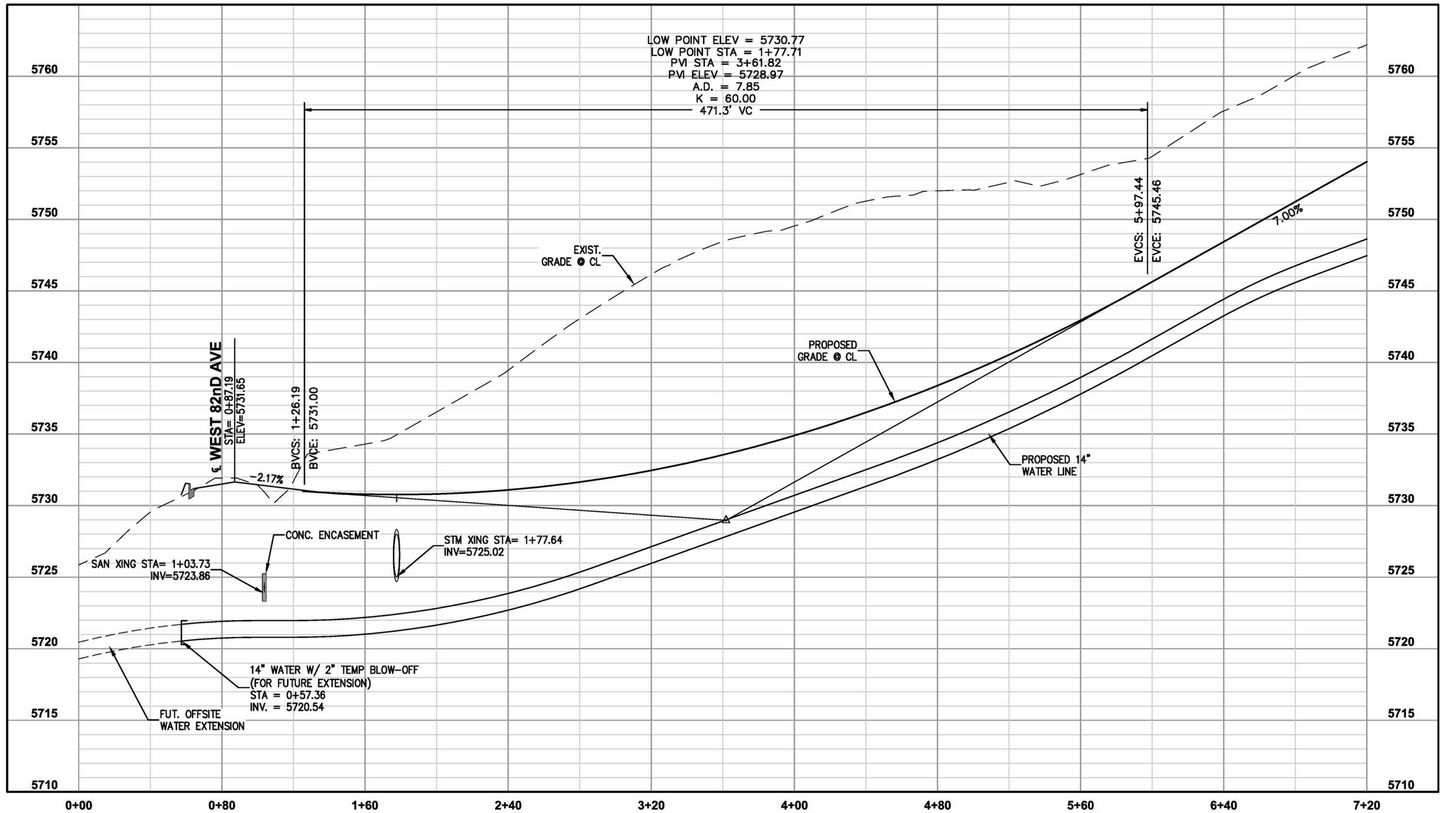
prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: P-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 21 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\21-0054-F1-TERRY WAY 1-ROAD-B1014.dwg, 6/16/2015 11:41:50 AM



YULE WAY PLAN AND PROFILE



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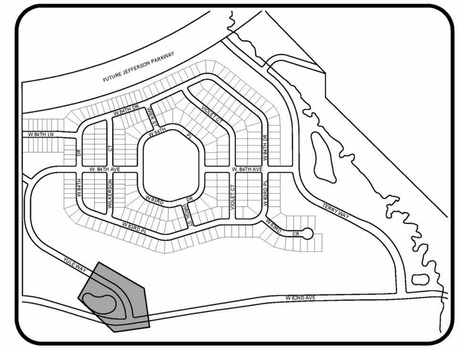

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

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2. ALL ELEVATIONS ARE FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.
4. ALL HANDICAP RAMPS TO CONFORM TO CURRENT ARVADA STANDARDS.
5. ALL STREETS ARE LOCAL UNLESS NOTED OTHERWISE.

APPROVED: _____ 3-8-12 3354
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6039 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
ROAD PLAN & PROFILE
YULE WAY - 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 25 OF 119

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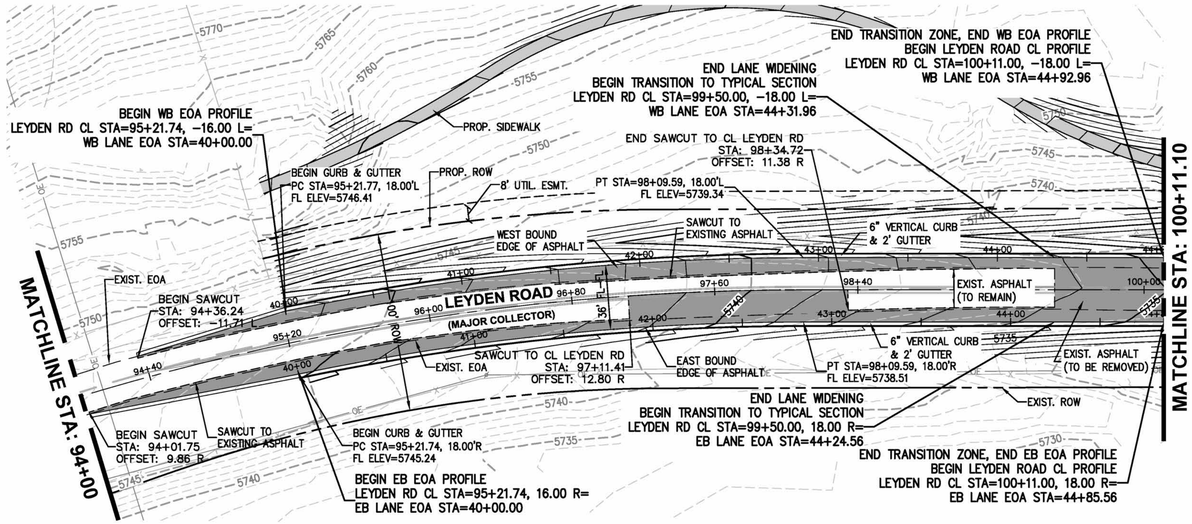
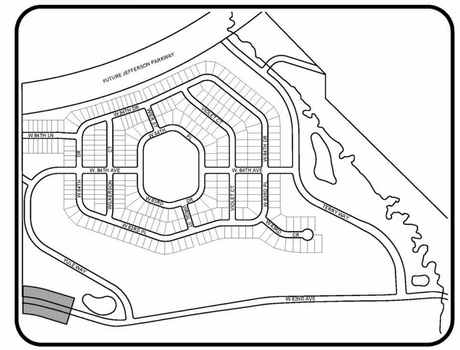
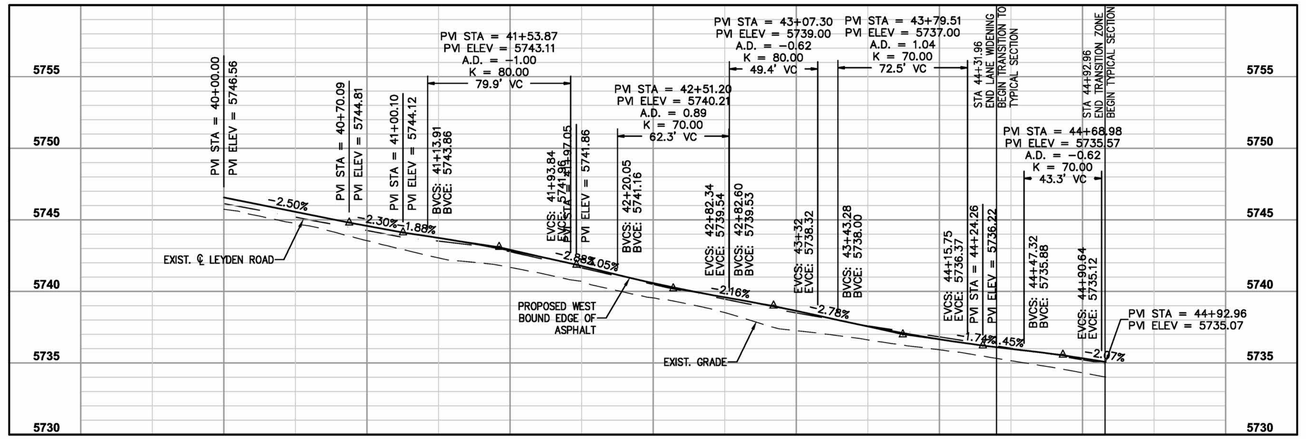


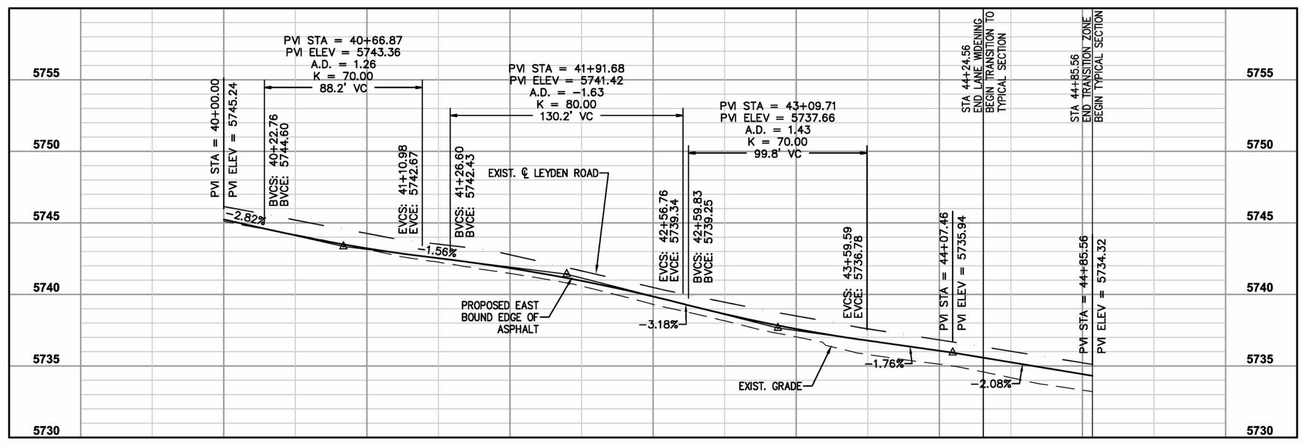
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



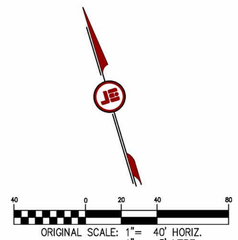
KEYMAP
N.T.S.



WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED:
CITY ENGINEER — DATE 3-8-12 — 3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PDJ	12/15/14

COLORADO REGISTERED
MARK P. BISHOP
33801
PROFESSIONAL ENGINEER

JEHN ENGINEERING
9990 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6038 FAX (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 1

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	P1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 52 OF 119

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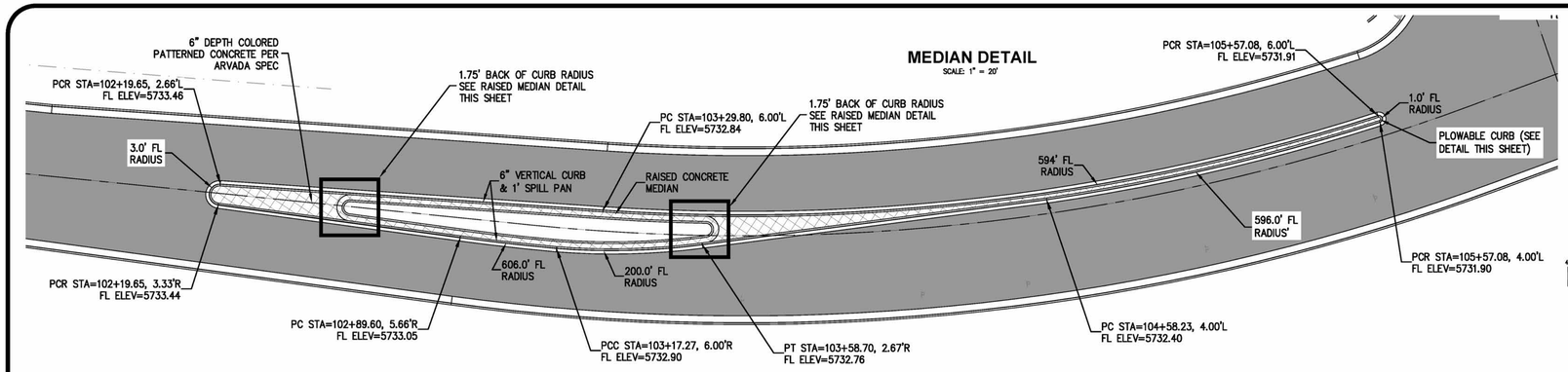

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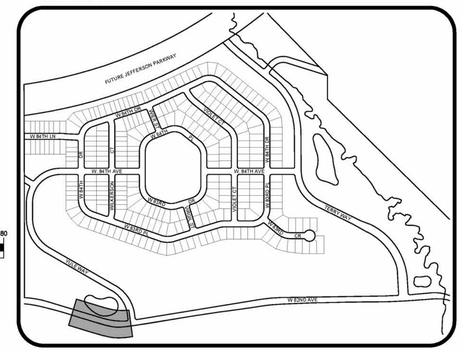

KEYMAP
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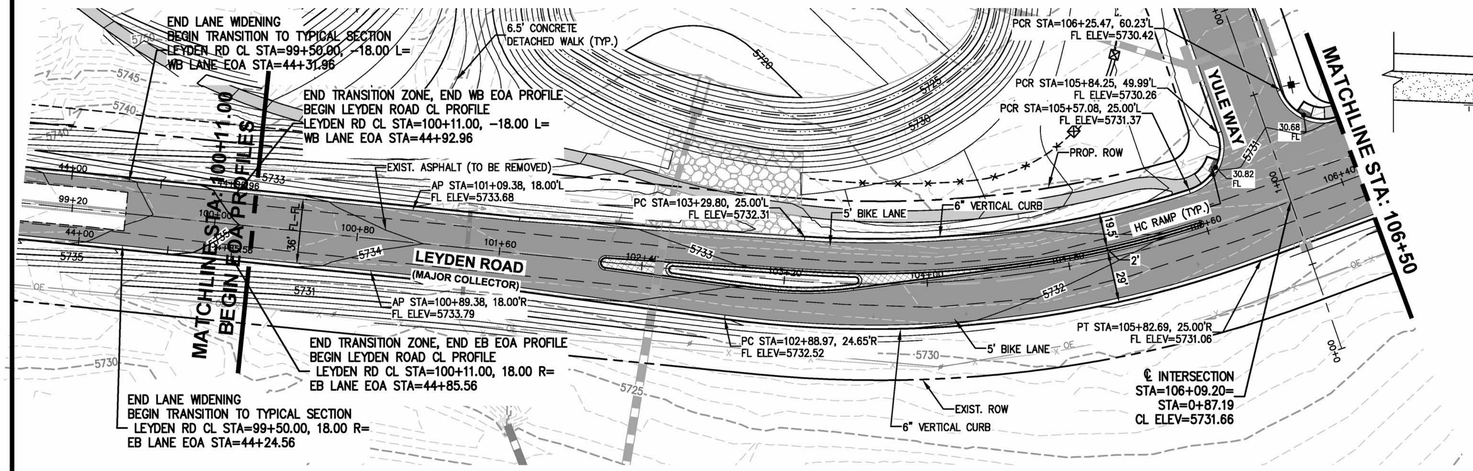
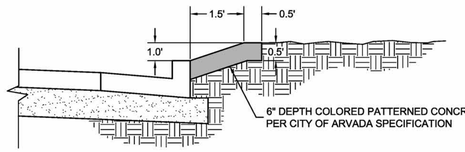
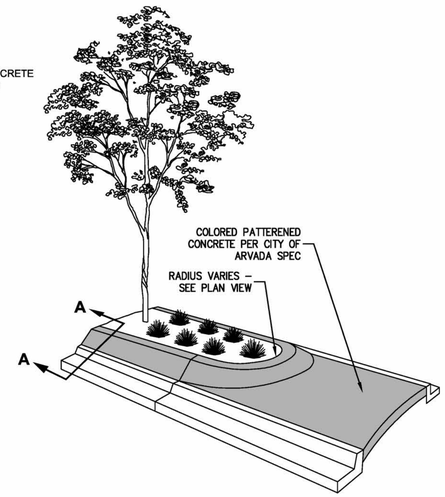


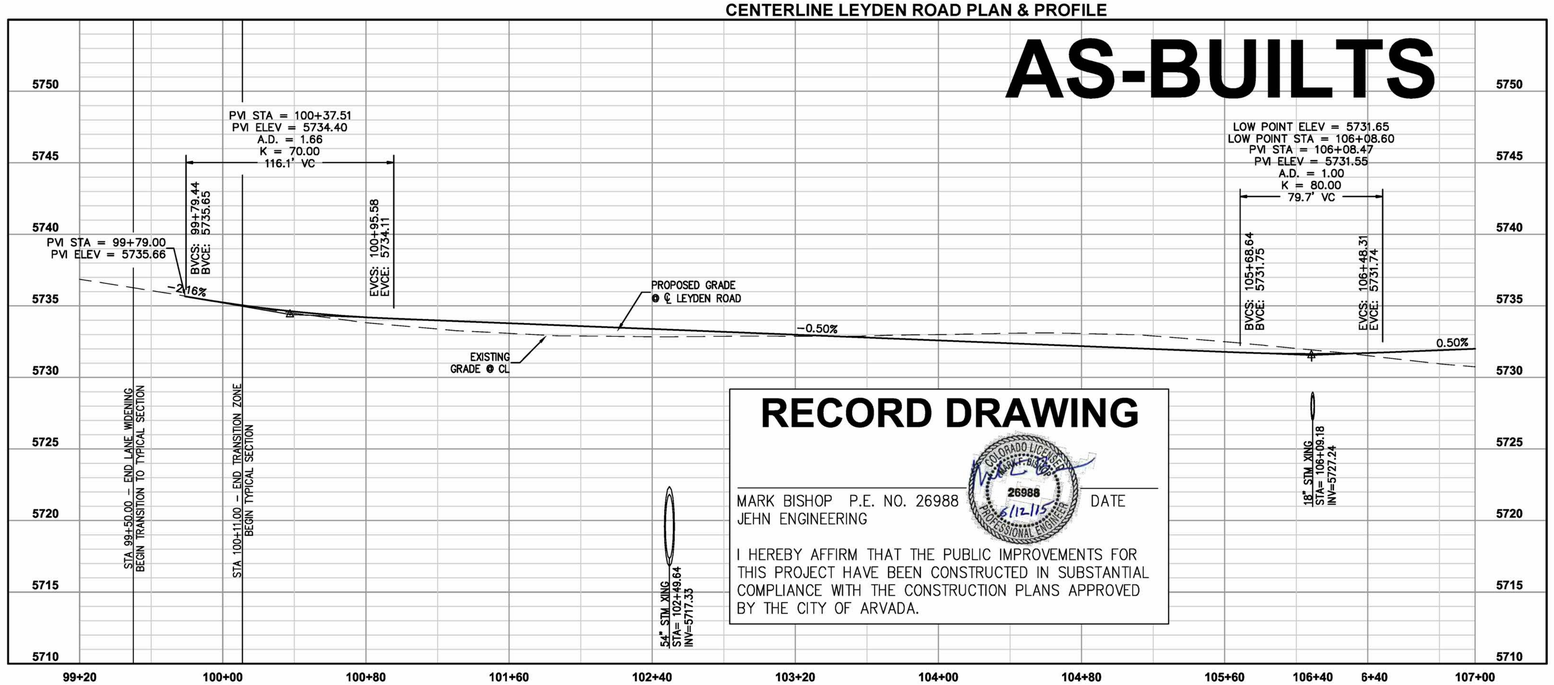


SECTION A-A
NTS



RAISED MEDIAN DETAIL
NTS

CENTERLINE LEYDEN ROAD PLAN & PROFILE

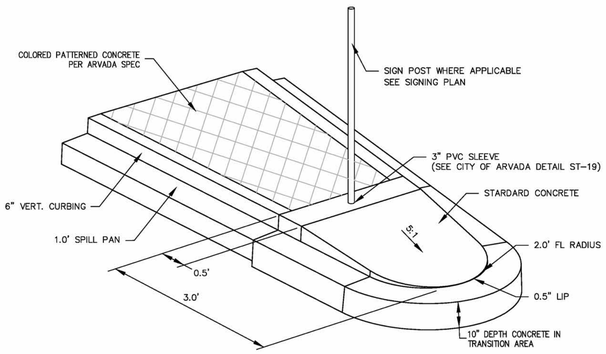


RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED MARK BISHOP 26988 PROFESSIONAL ENGINEER 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.



PLOWABLE CURB DETAIL
NTS

NOTES

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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED: _____ CITY ENGINEER
8-8-12 DATE
3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED MARK BISHOP 12-15-14 26988 PROFESSIONAL ENGINEER

JEHN ENGINEERING JE
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 2

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 53 OF 119

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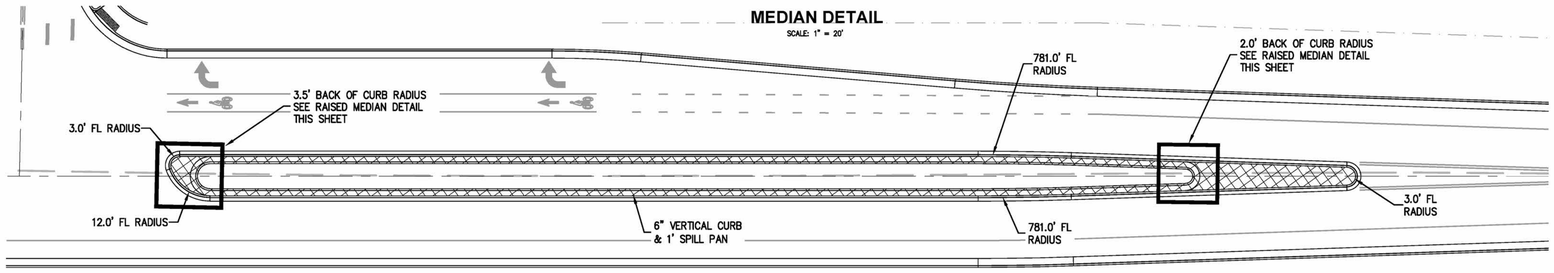
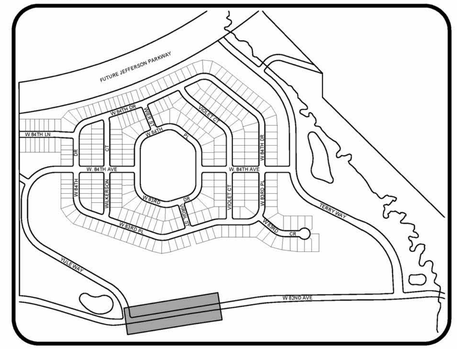
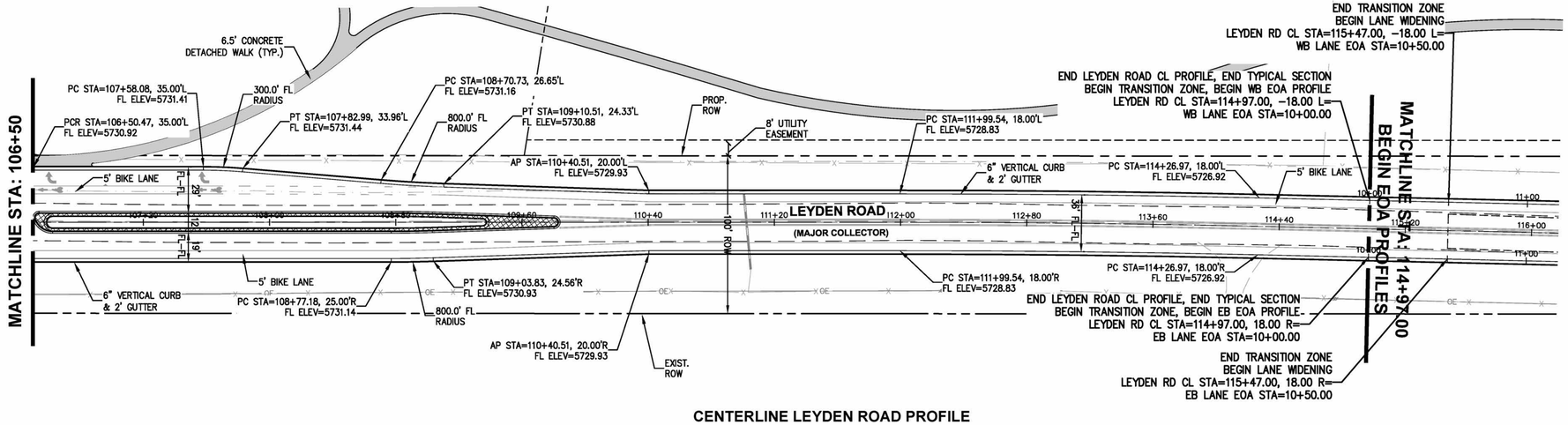
MEDIAN DETAIL

SCALE: 1" = 20'

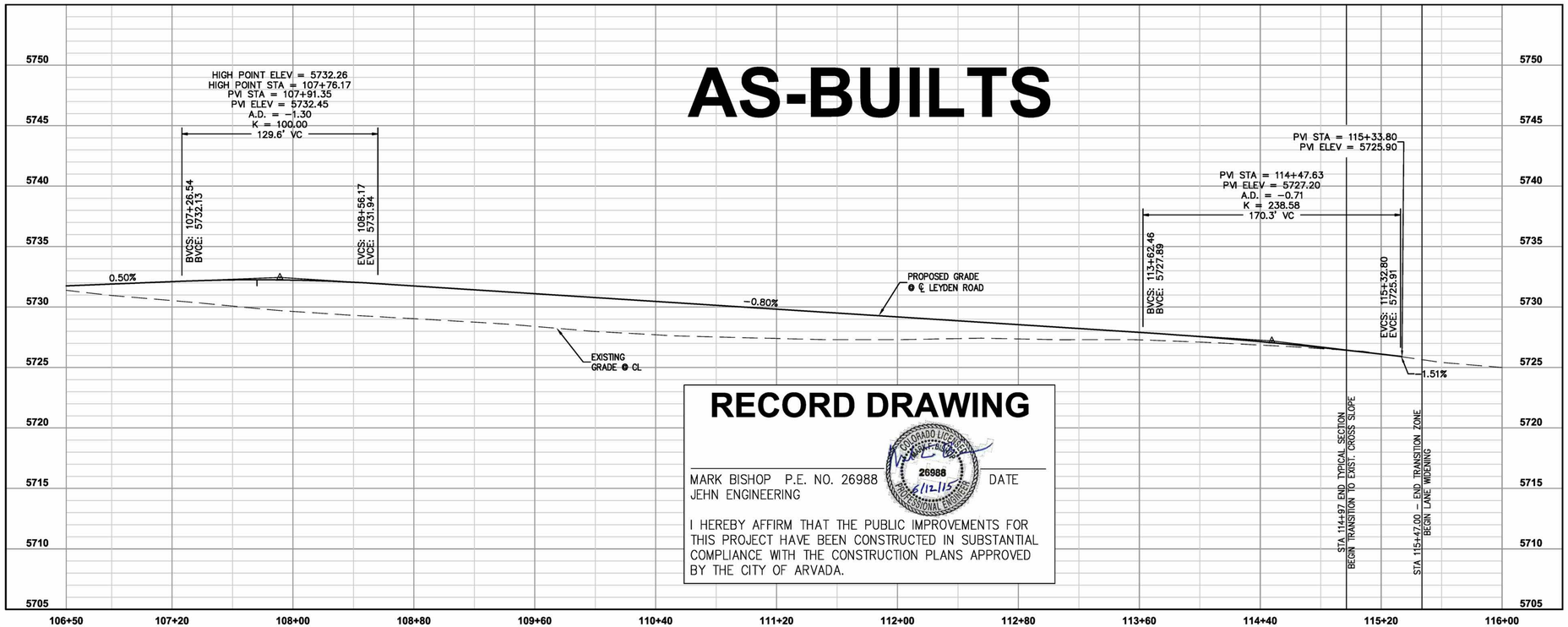




KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED
MARK BISHOP
26988
PROFESSIONAL ENGINEER
6/12/15

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APPROVED:
CITY ENGINEER — DATE: 8-8-12 — JOB NUMBER: 3352

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED
MARK BISHOP
12-15-14
33801
PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-5438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 3

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 54 OF 119

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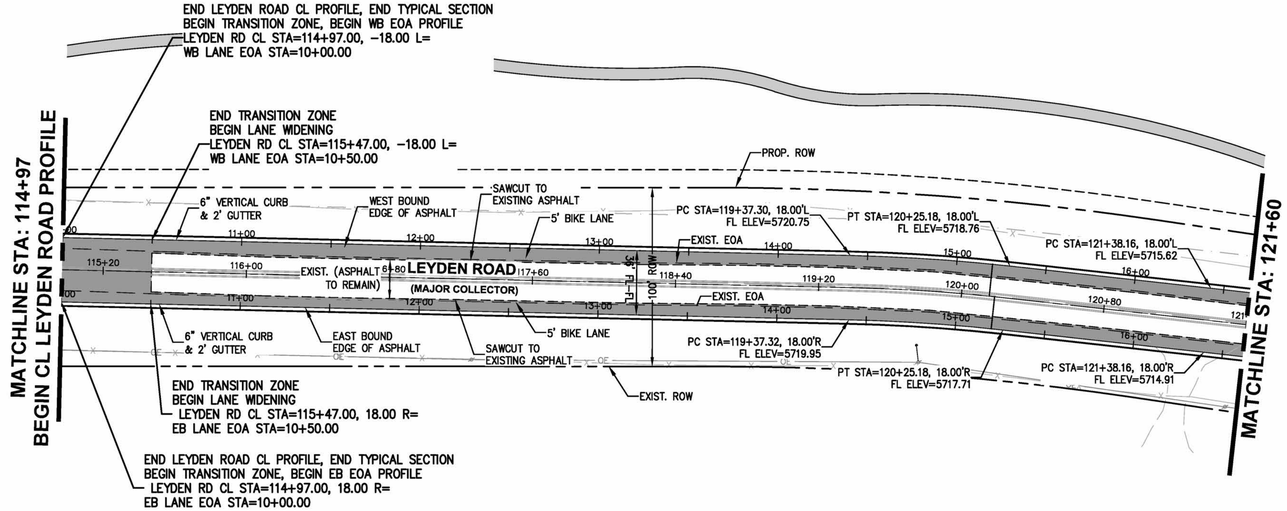
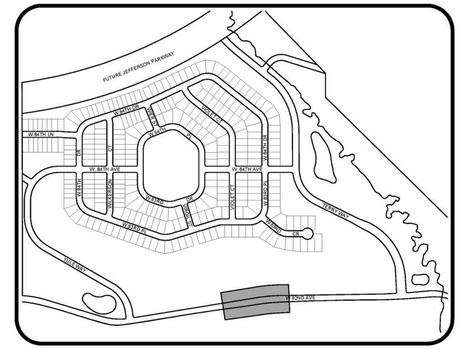
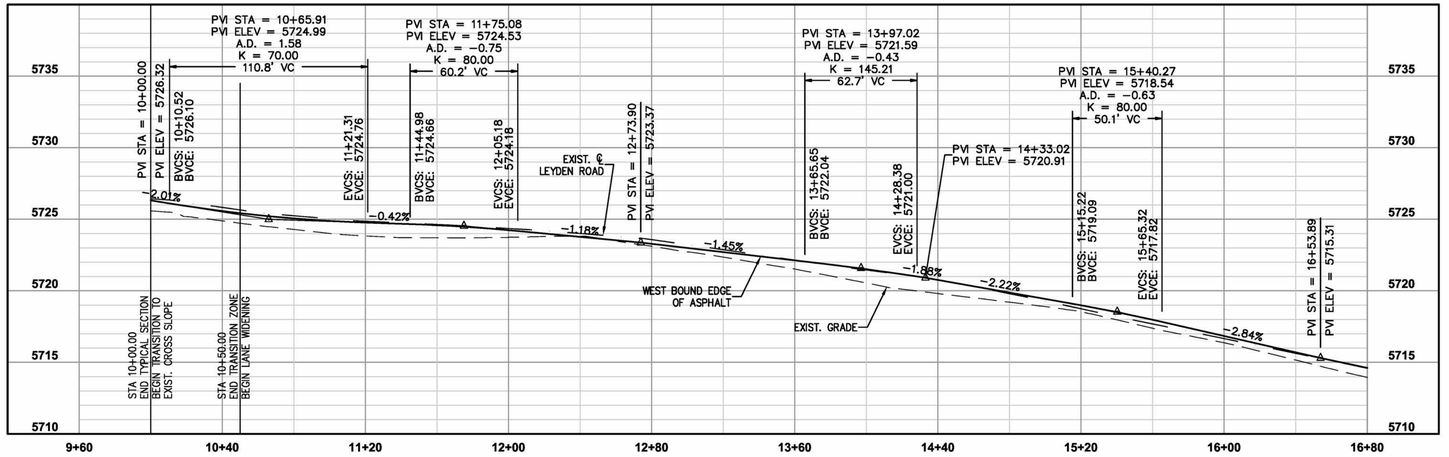
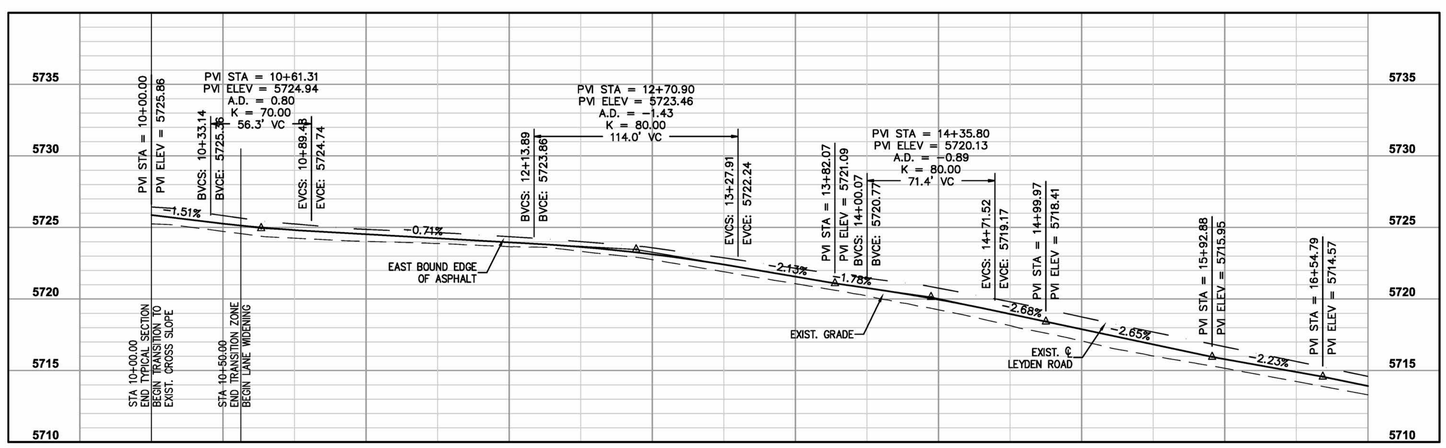




AS-BUILTS



WEST BOUND LANE EDGE OF ASPHALT PROFILE



EAST BOUND LANE EDGE OF ASPHALT PROFILE

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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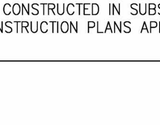

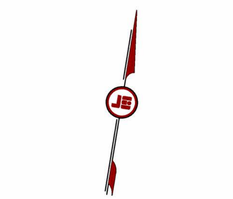

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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED:
CITY ENGINEER — DATE: 3-8-12 — 3352 JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER — KENNETH PAUL KNOTEK — 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 4

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	H-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 55 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\55-0054-F1-P&P-4-81014.dwg, 6/17/2015 8:45:52 AM

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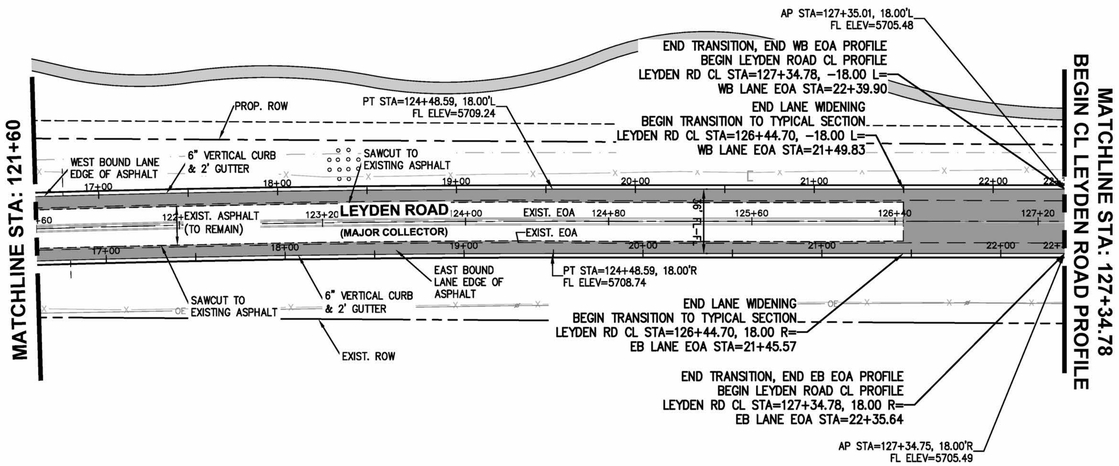
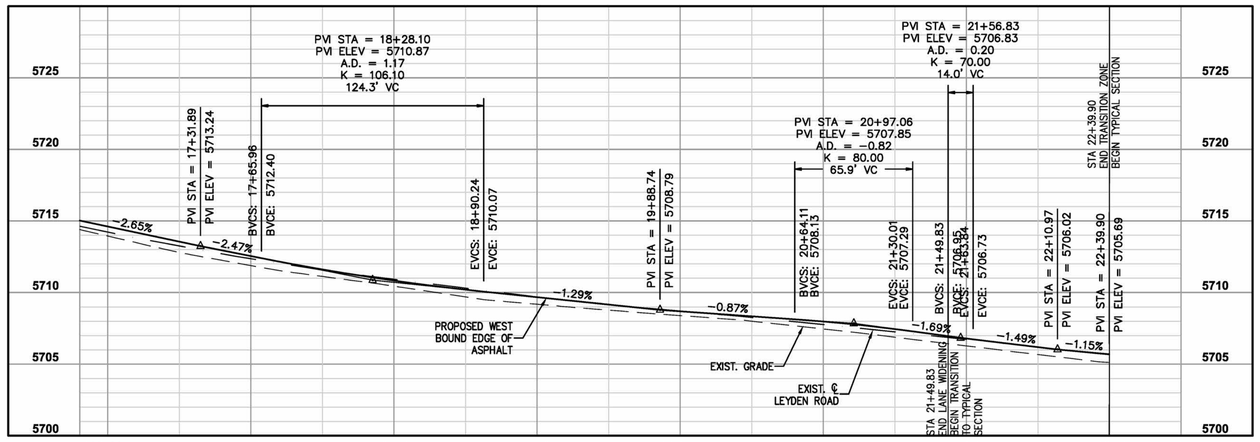
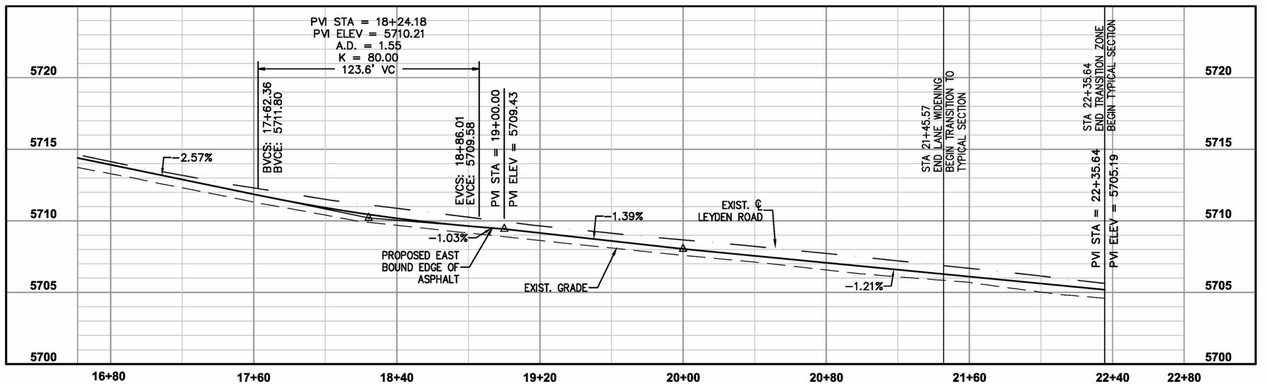




WEST BOUND LANE EDGE OF ASPHALT PROFILE



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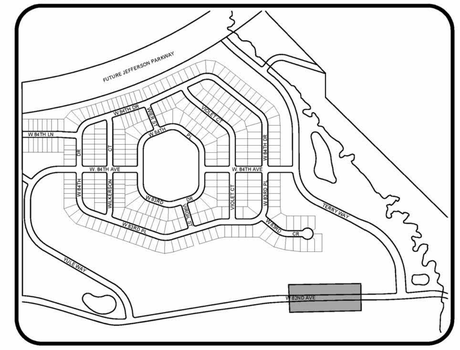

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

COLORADO LICENSED 26988 PROFESSIONAL ENGINEER 6/12/15

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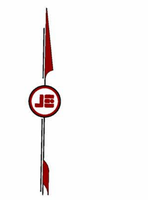

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APPROVED: _____ CITY ENGINEER
3-8-12 DATE
3352 JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PAU

REVISIONS

COLORADO REGISTERED 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-8008 FAX: (303) 467-5408

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 5

prepared for
RRCEA, LLC.

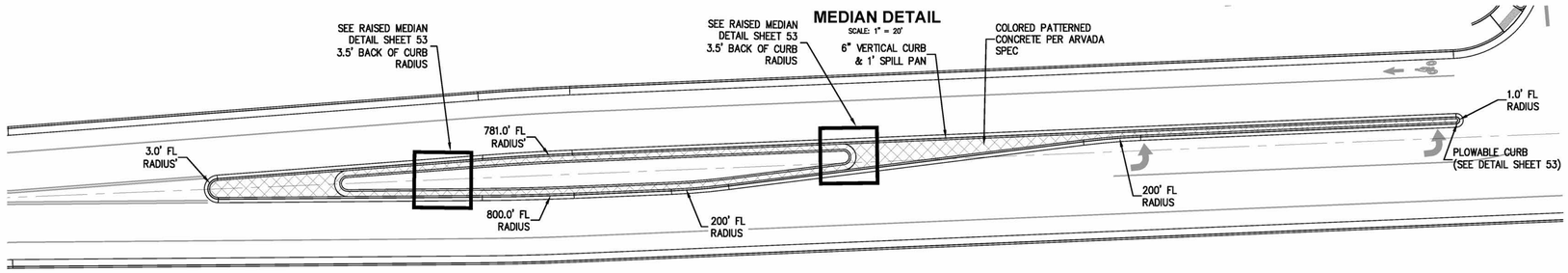
DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

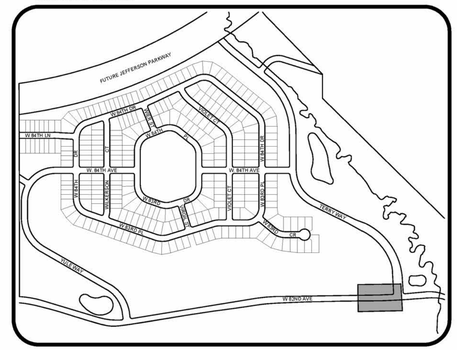
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 56 OF 119

J:\2036\210-054\SURVEY\AS-BUILTS\set\SK-0054-F1-P&P-5-81014.dwg, 6/17/2015 8:44:48 AM

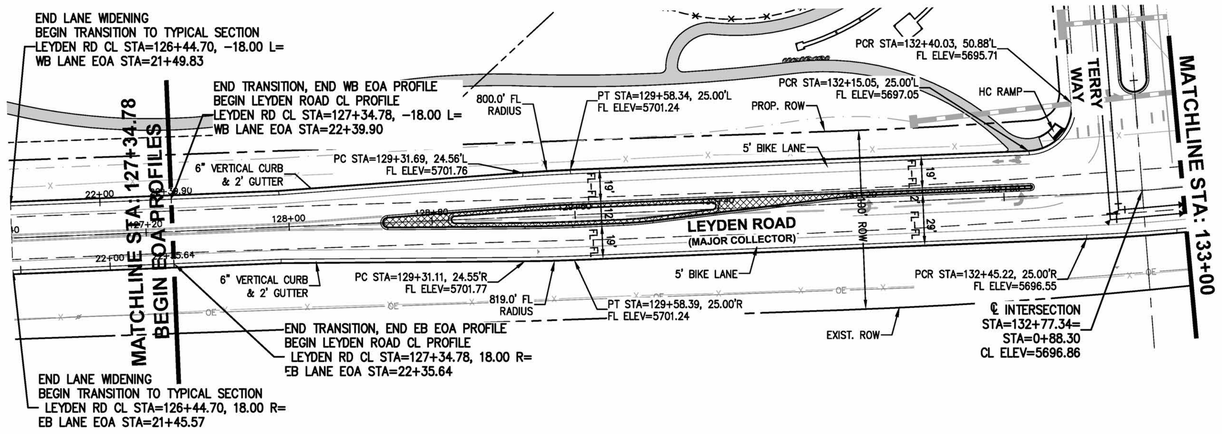
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

MEDIAN DETAIL
SCALE: 1" = 20'

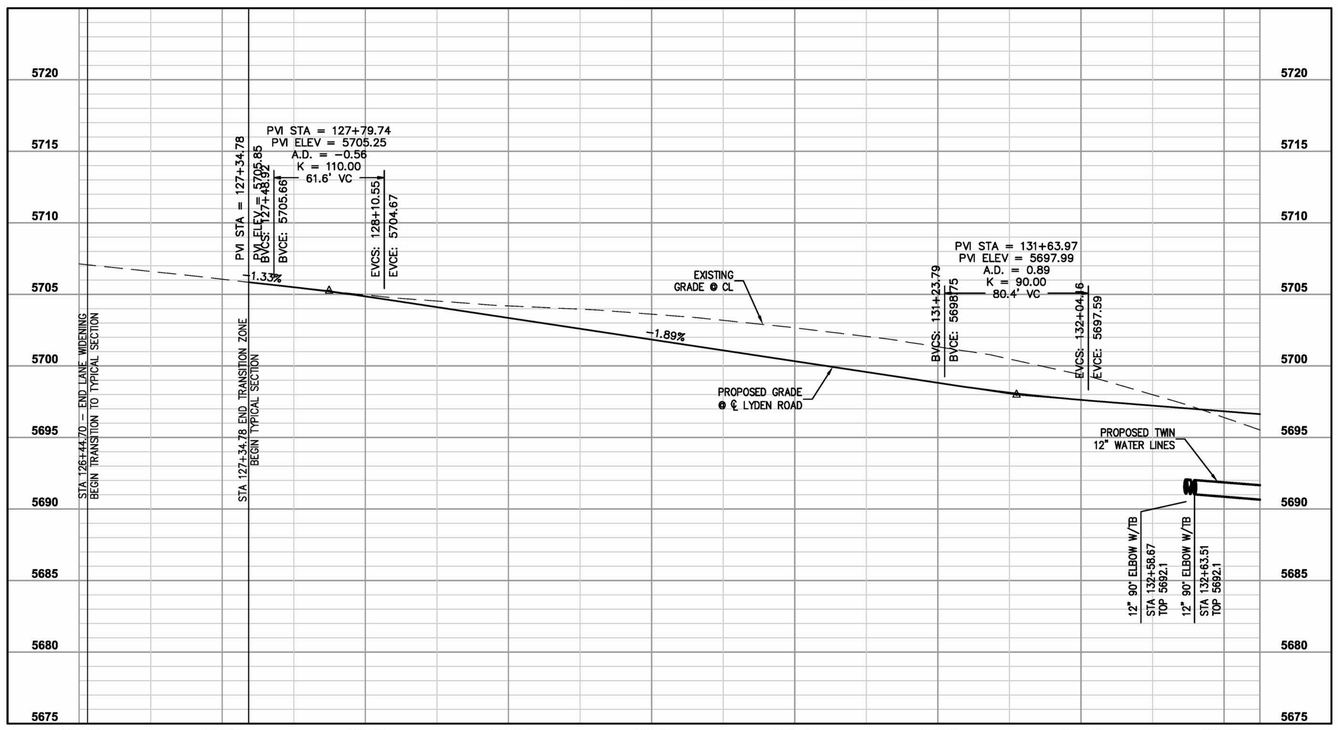




KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE

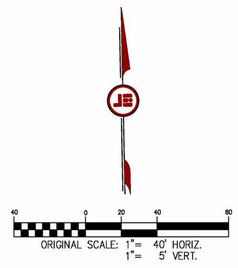


AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL CURB RETURN FL RADII ARE 25' UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS AND OFFSETS ARE TO FL UNLESS NOTED OTHERWISE.
3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED:
CITY ENGINEER — DATE 8-8-12 — 3352 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER — 33801 — 6-15-12

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 6

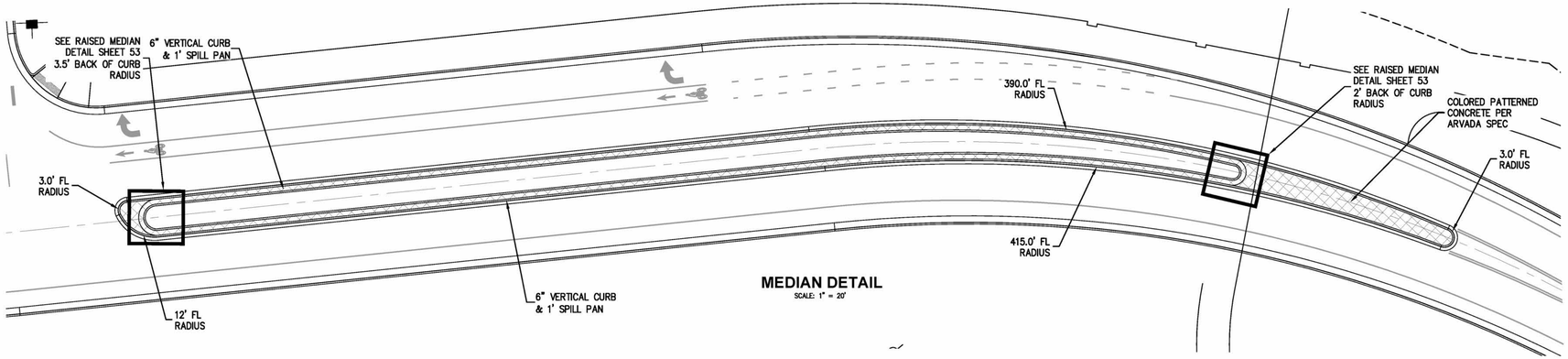
prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
OKK	OKK	F1-ASBUILTS	

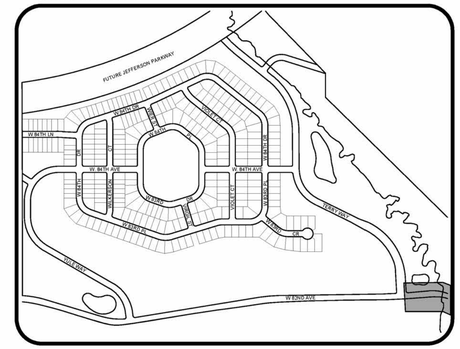
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 57 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\S7-0054-F1-P&P-6-81014.dwg, 6/17/2015 8:43:30 AM

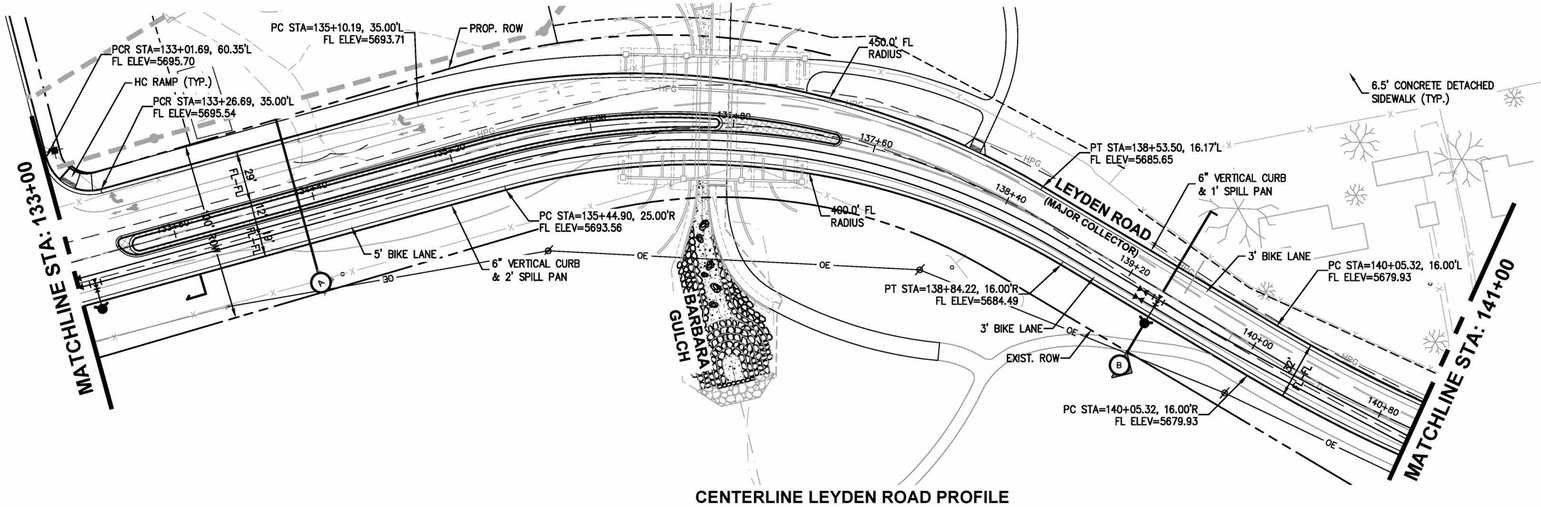
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



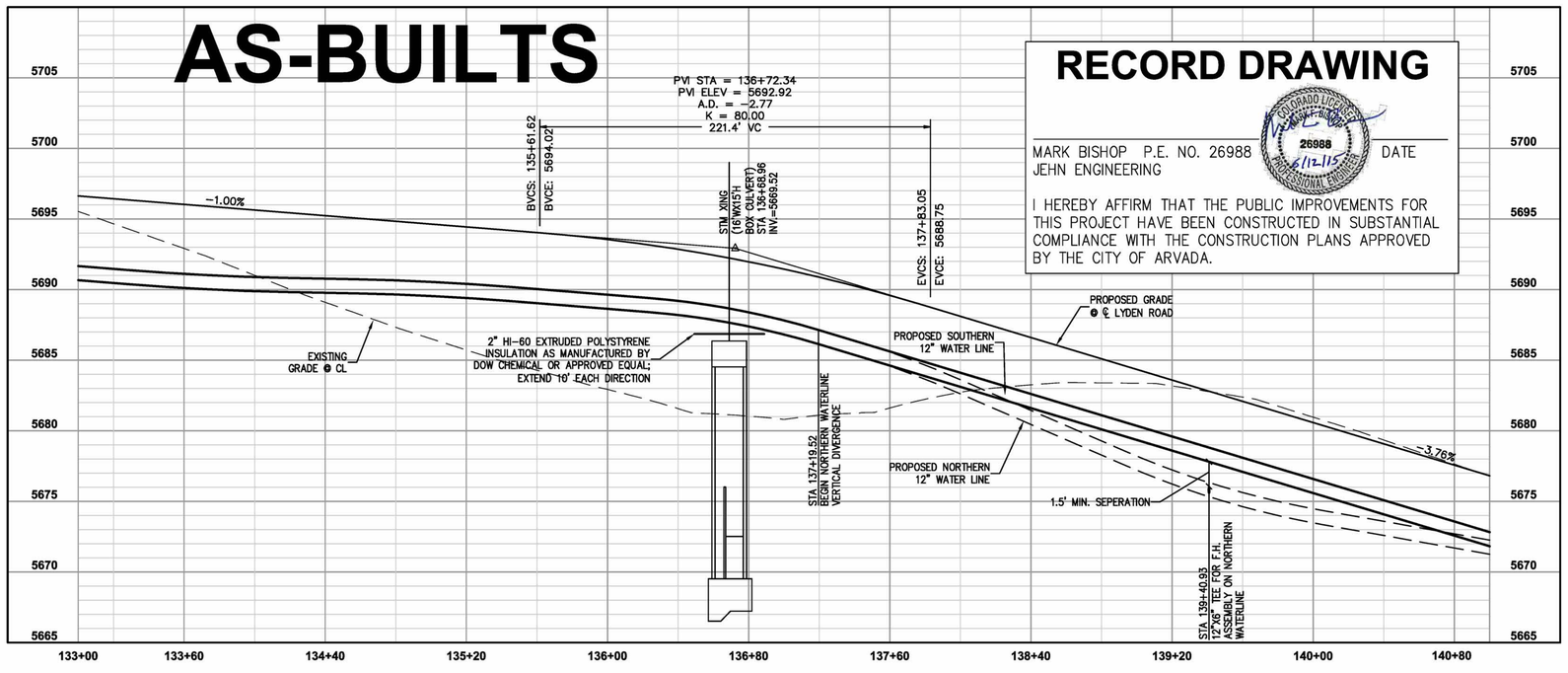
MEDIAN DETAIL
SCALE: 1" = 20'



KEYMAP
N.T.S.



CENTERLINE LEYDEN ROAD PROFILE

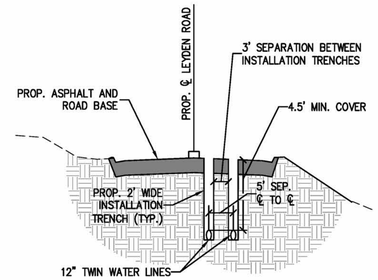


RECORD DRAWING

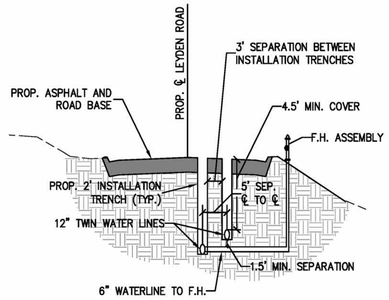
MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

26988 6/12/15

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

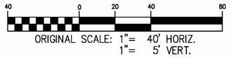


TWIN 12" WATERLINE TYPICAL SECTION A-A
N.T.S.



SECTION B-B
N.T.S.





ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

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3. SEE PLAT FOR ROADWAY CURVE DATA AND TANGENT LENGTHS.

APPROVED: _____ 5-8-12 3352
CITY ENGINEER DATE JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PJU

REVISIONS

COLORADO REGISTERED 12-15-14 CHRISTOPHER T. TOMAO 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
9990 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 457-9438

LEYDEN ROCK FILING 1
LEYDEN ROAD
PLAN & PROFILE 7

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: OKK
DRAWING NAME: P1-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 58 OF 119

J:\2036\210-054\SURVEY\ASBUILTs\set\58-0054-F1-P&P-7-81D14.dwg, 6/17/2015 8:51:22 AM

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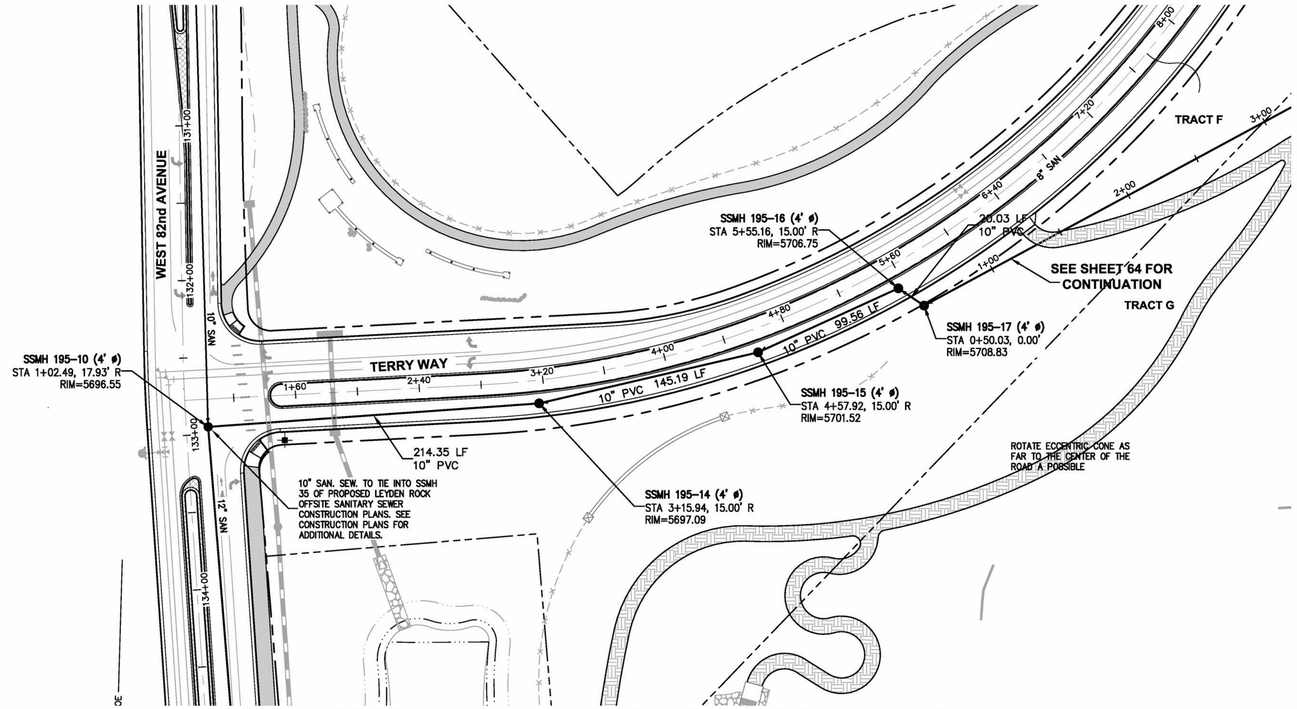
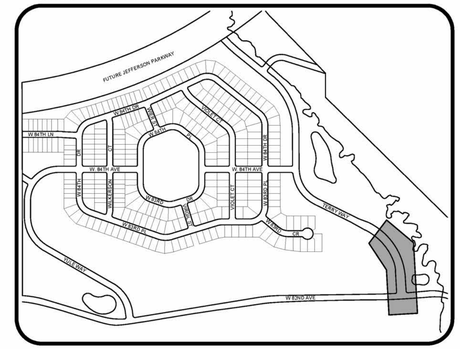
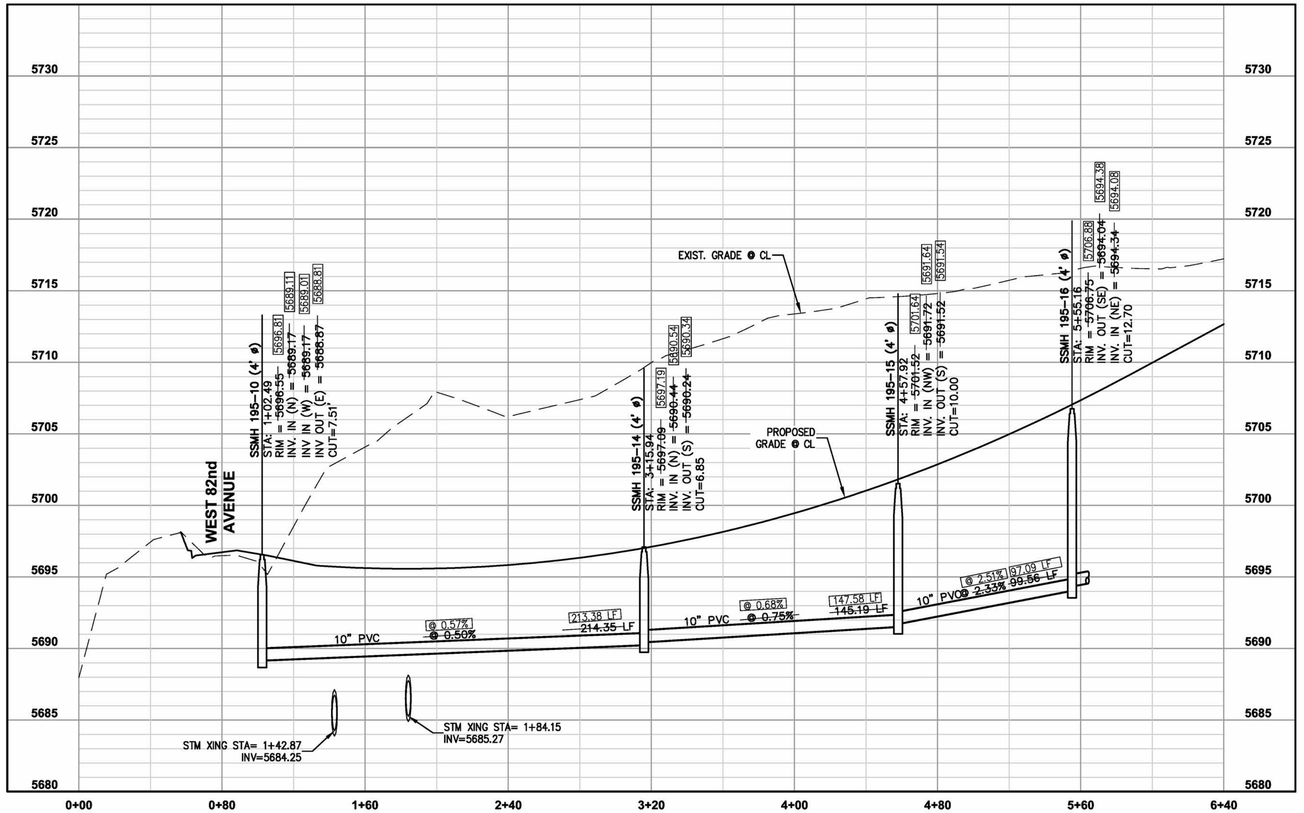




KEYMAP
N.T.S.

AS-BUILTS

TERRY WAY SANITARY SEWER PLAN AND PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED: CITY ENGINEER — DATE — JOB NUMBER 3354

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PNJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
9980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING 1
SANITARY PLAN & PROFILE
TERRY WAY - 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 63 OF 119

J:\2036\210-054\SURVEY\ASBUILTs\ref\63-073013-F1-SS-TERRY RD-810214.dwg, 6/17/2015 9:15:24 AM

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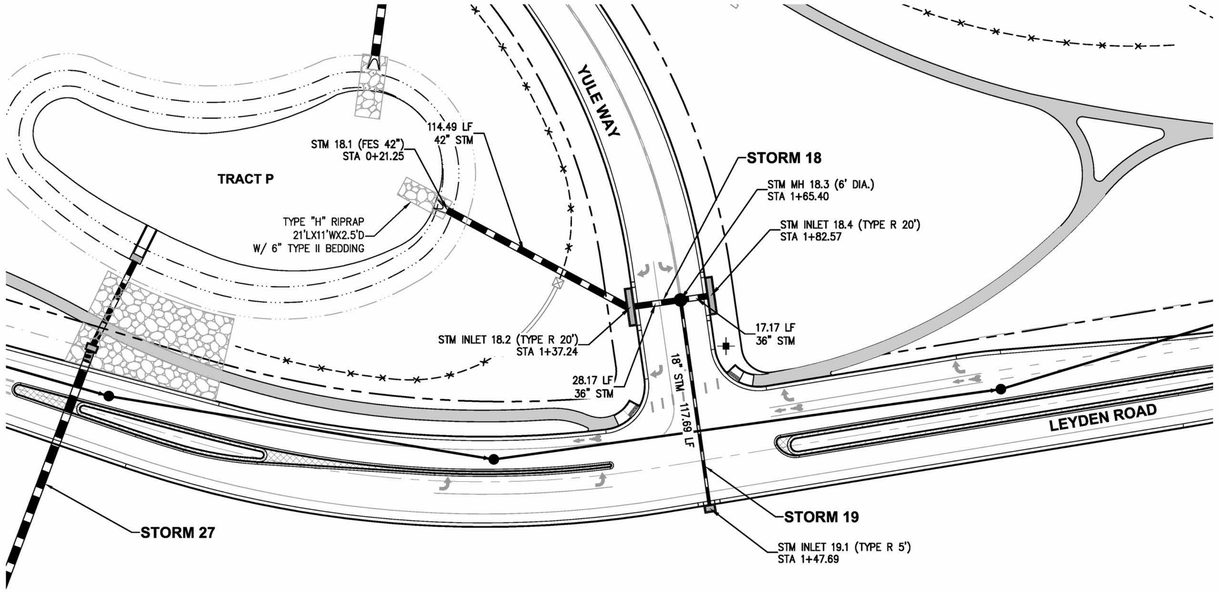

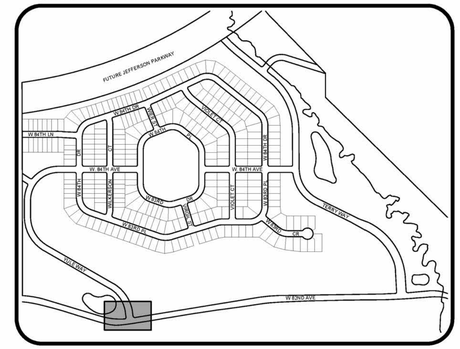

KEYMAP
N.T.S.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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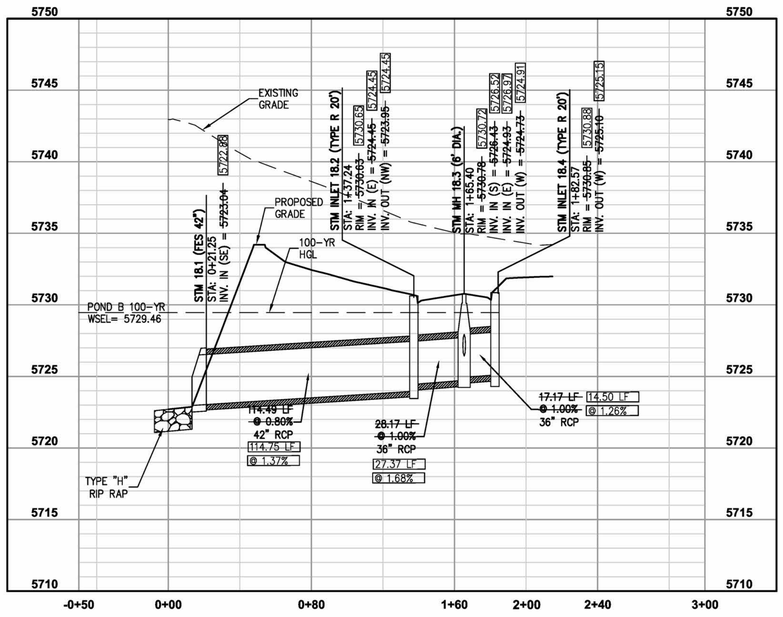
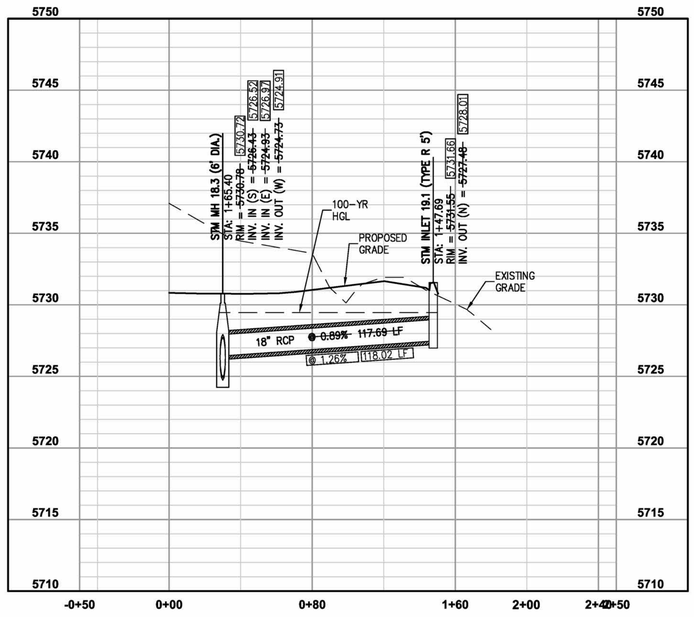
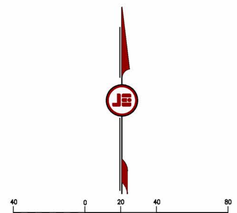
STM 18 PLAN AND PROFILE



STM 19 PLAN AND PROFILE





ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER
9-8-12
3354

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER — MARK BISHOP — 21-12 — 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-5438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 18 & 19

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 97 OF 119

J:\2036\210-054\SURVEY\ASBUILT\xref\97-080513-F1-STM-18-19-81014.dwg, 6/17/2015 10:26:25 AM

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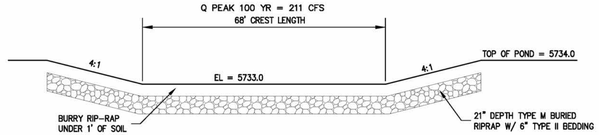
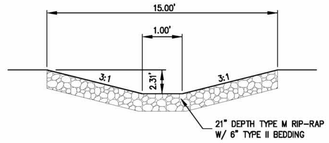


EMERGENCY OVERFLOW WIER
N.T.S.



DRAINAGE SWALE
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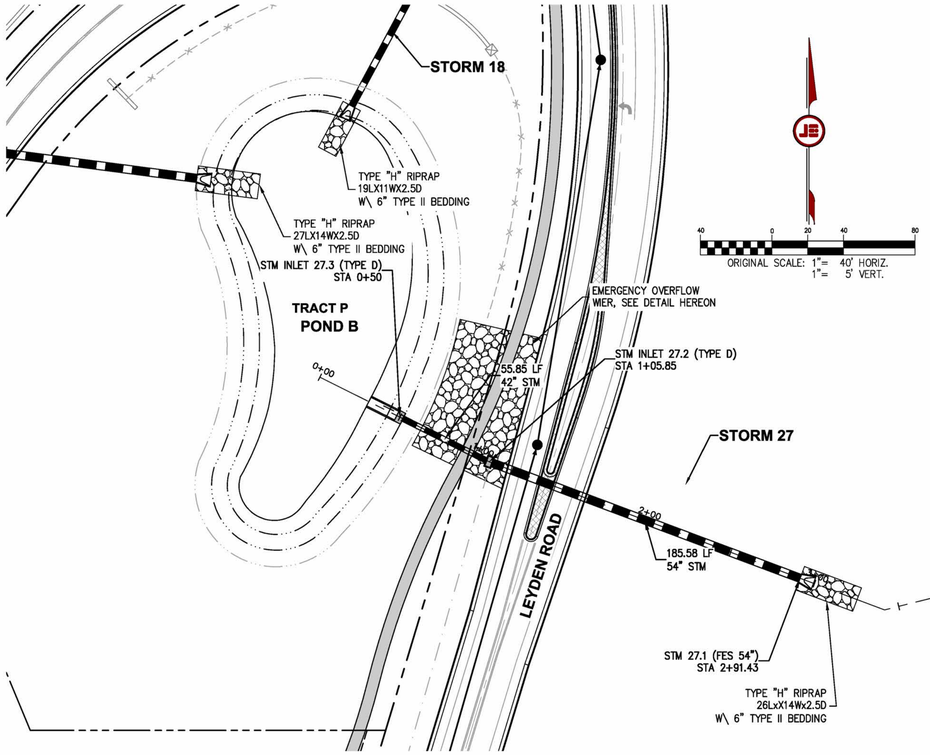
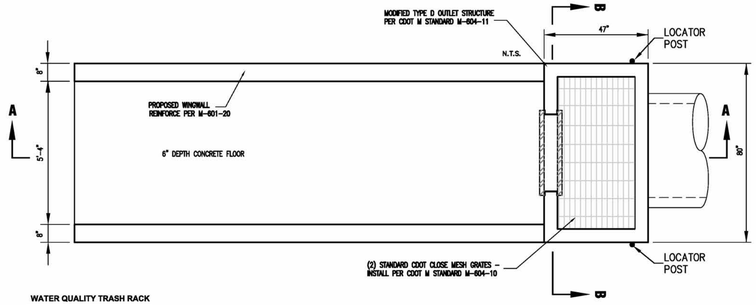
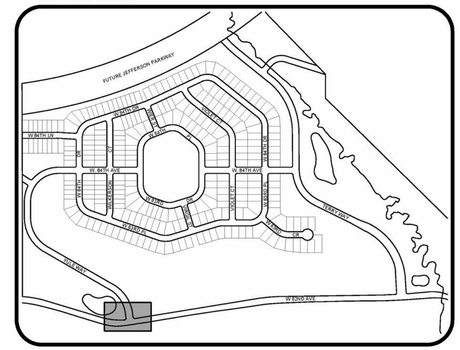


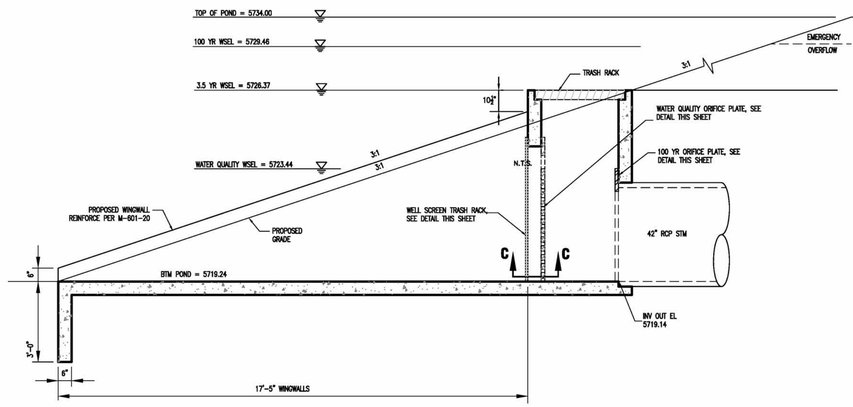


WATER QUALITY TRASH RACK
N.T.S.

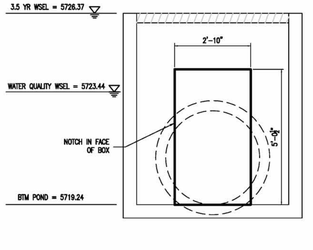
OUTLET STRUCTURE - PLAN VIEW
N.T.S.



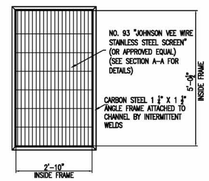
AS-BUILTS



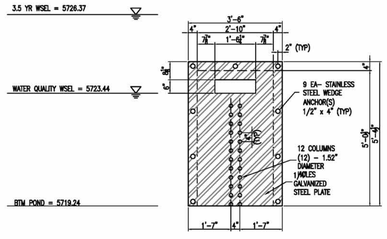
OUTLET STRUCTURE - SECTION A-A
N.T.S.



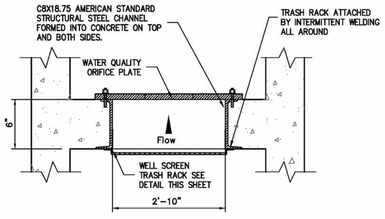
OUTLET STRUCTURE - SECTION B-B
N.T.S.



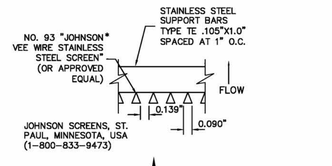
WATER QUALITY TRASH RACK
N.T.S.



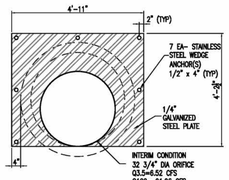
WATER QUALITY ORIFICE PLATE
N.T.S.



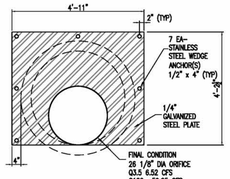
OUTLET STRUCTURE - SECTION C-C
N.T.S.



WELL SRREEN TRASH RACK DETAIL
N.T.S.

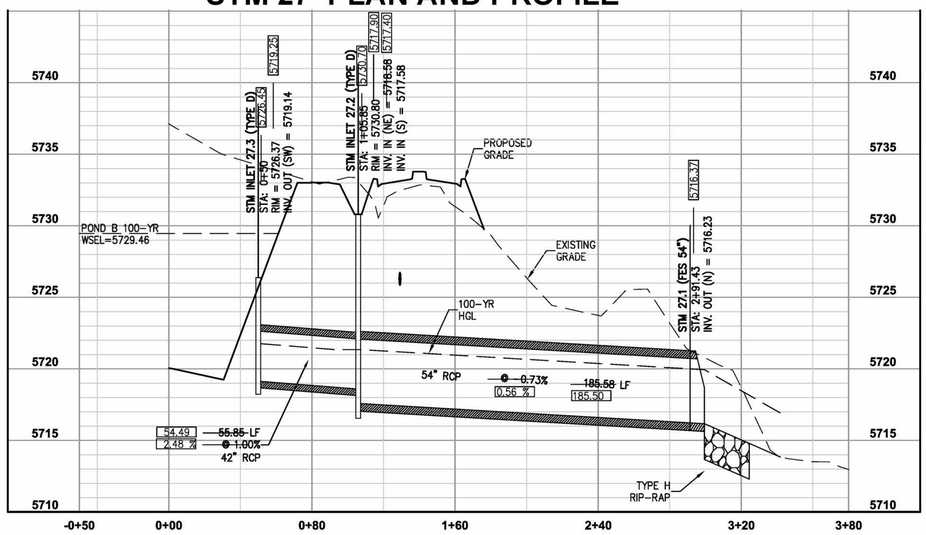


INTERIM 100 YEAR ORIFICE PLATE
N.T.S.



FINAL 100 YEAR ORIFICE PLATE
N.T.S.

STM 27 PLAN AND PROFILE



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

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for marking of underground member utilities.

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER — 33801 — 12-21-12

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 27 - POND B

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: F1-ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 104 OF 119

J:\2036\210-054\SURVEY\ASBUILT\set\104-080513-F1-STM-27-81014.dwg, 6/17/2015 10:48:54 AM

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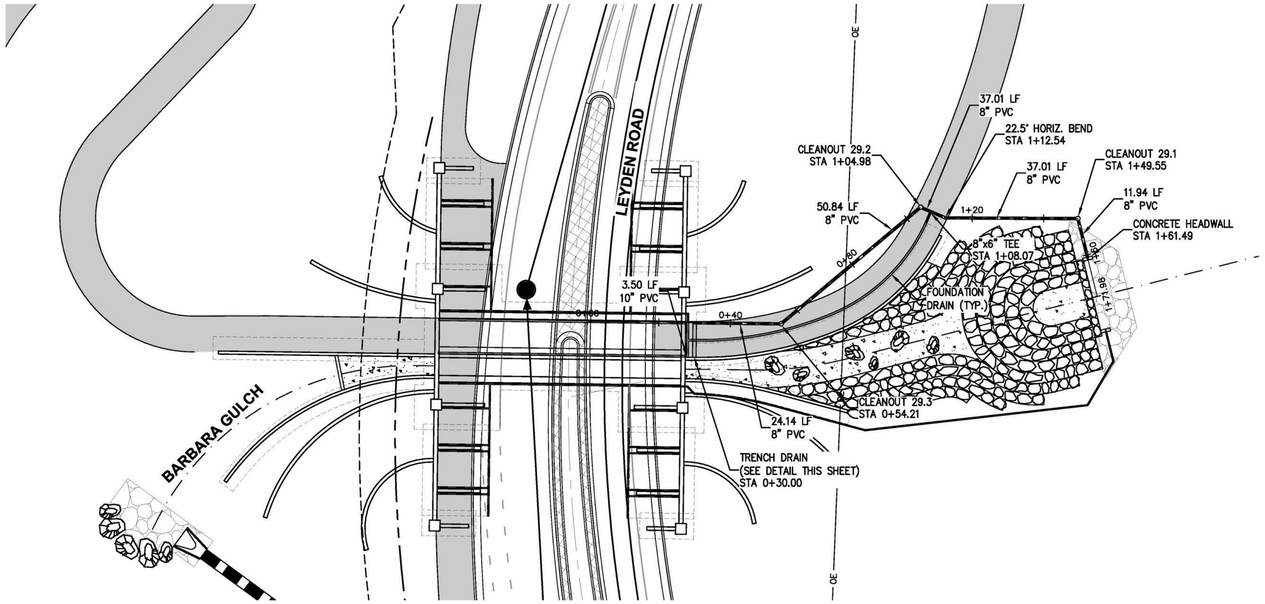
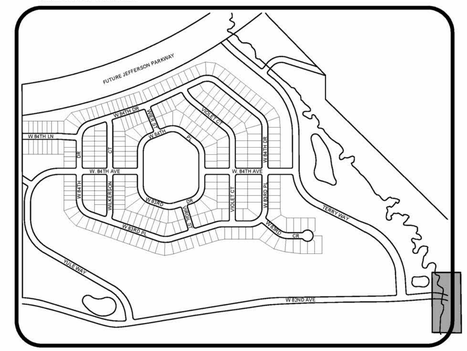






ORIGINAL SCALE: 1"= 20' HORIZ.
1"= 5' VERT.



KEYMAP
N.T.S.

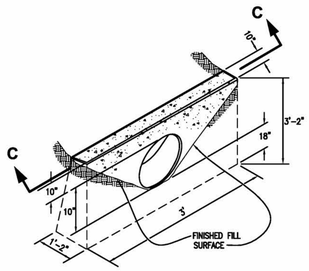
AS-BUILTS

RECORD DRAWING

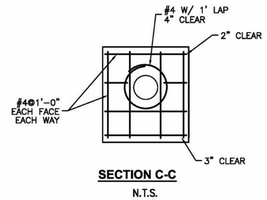
MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

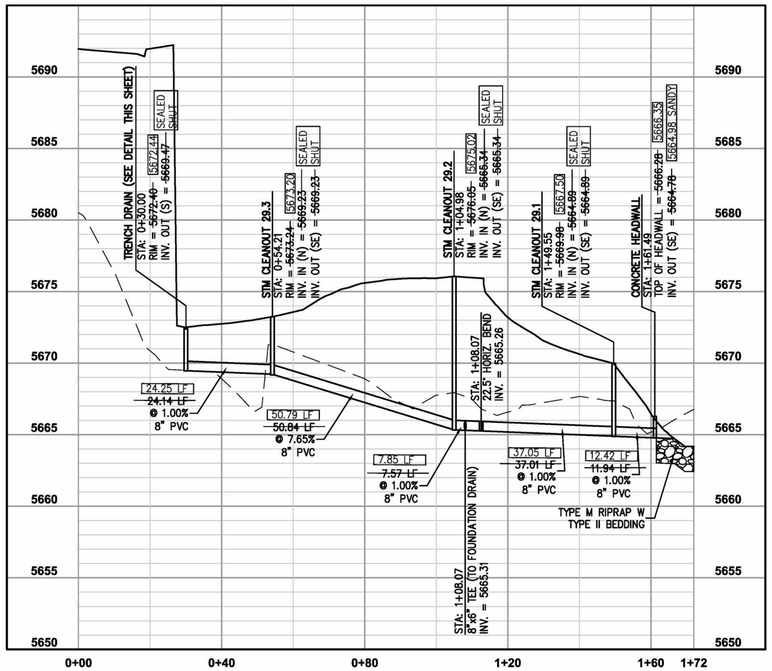
STORM 29 - PLAN AND PROFILE

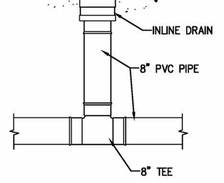


OUTLET HEADWALL DETAIL
N.T.S.

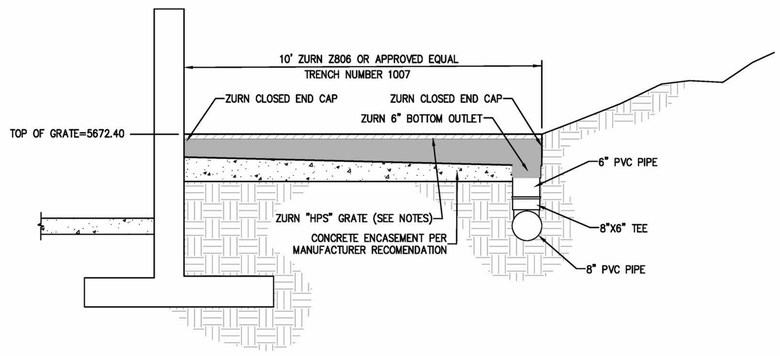


SECTION C-C
N.T.S.





CLEANOUT DETAIL
NTS



TRENCH DRAIN DETAIL
NTS

NOTES

TRENCH DRAINS SHALL BE ZERN Z806 PERMA-TRENCH OR ENGINEER APPROVED EQUAL. USE ZURN SUFFIX "HPS" GRATE - HEEL-PROOF, STAINLESS STEEL, ADA COMPLIANT.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3354

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	PAU	12/15/14

REVISIONS

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-9438

LEYDEN ROCK FILING 1
STORM PLAN & PROFILE
STM 29

prepared for
RRCEA, LLC.

DRAWN BY: ----- DESIGNED BY: ----- DRAWING NAME: 2036210-0545-STM-29-81014.dwg APPROVED BY:

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 106 OF 119

J:\2036\210-0545\DRIVEVASBUILT\set\106-108013-F1-STM-29-81014.dwg, 6/17/2015 10:45:07 AM

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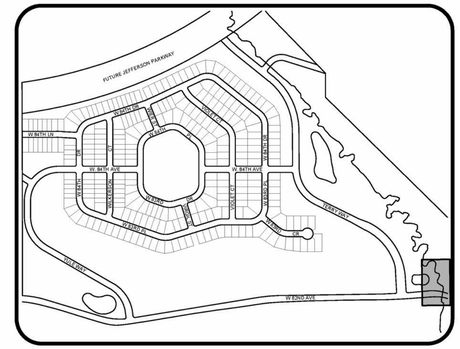
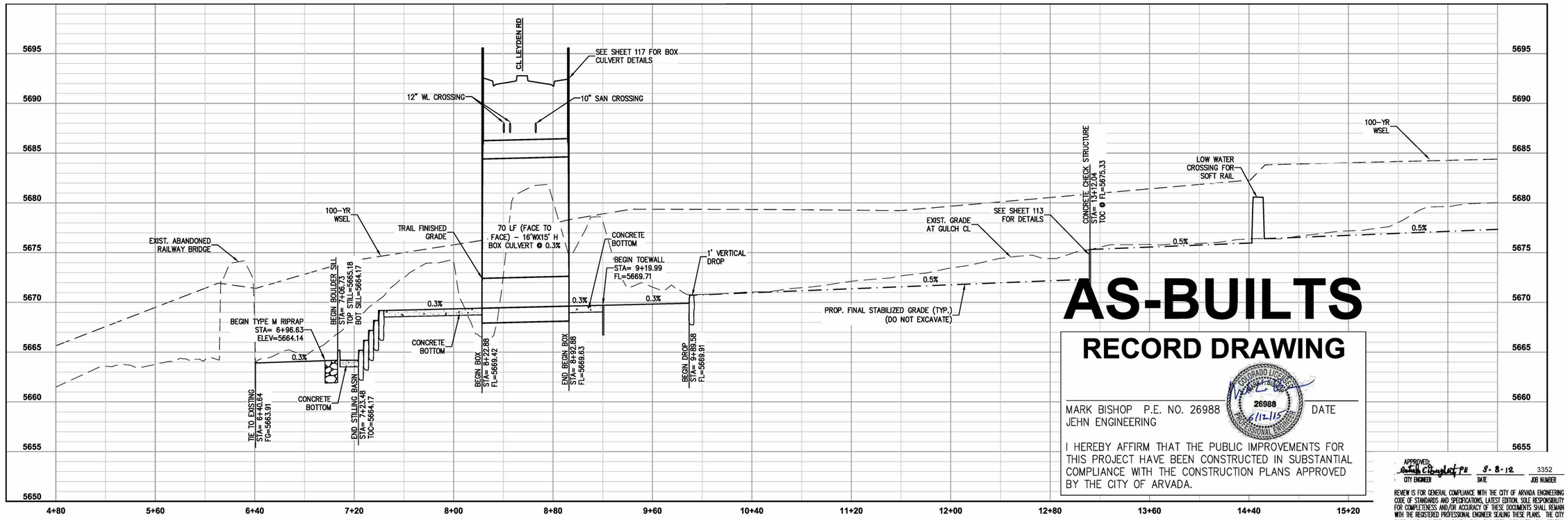


KEYMAP
N.T.S.

BARBARA GULCH NOTES:

1. BARBARA GULCH DRAINAGEWAY IMPROVEMENTS CONSTRUCTED IN ASSOCIATION WITH THE DEVELOPMENT OF THE LEYDEN ROCK SUBDIVISION SHALL BE MAINTAINED BY THE LEYDEN ROCK METROPOLITAN DISTRICT #2.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: _____ 8-8-12 3352
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	BY	DATE
1	AS-BUILTS	ST	12/15/14

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 487-9438

LEYDEN ROCK FILING 1
BARBARA GULCH
PLAN & PROFILE 1

prepared for
RRCEA, LLC.

DRAWN BY: OKK
DESIGNED BY: BSS
DRAWING NAME: FASBUILTS
APPROVED BY:
JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 112 OF 119

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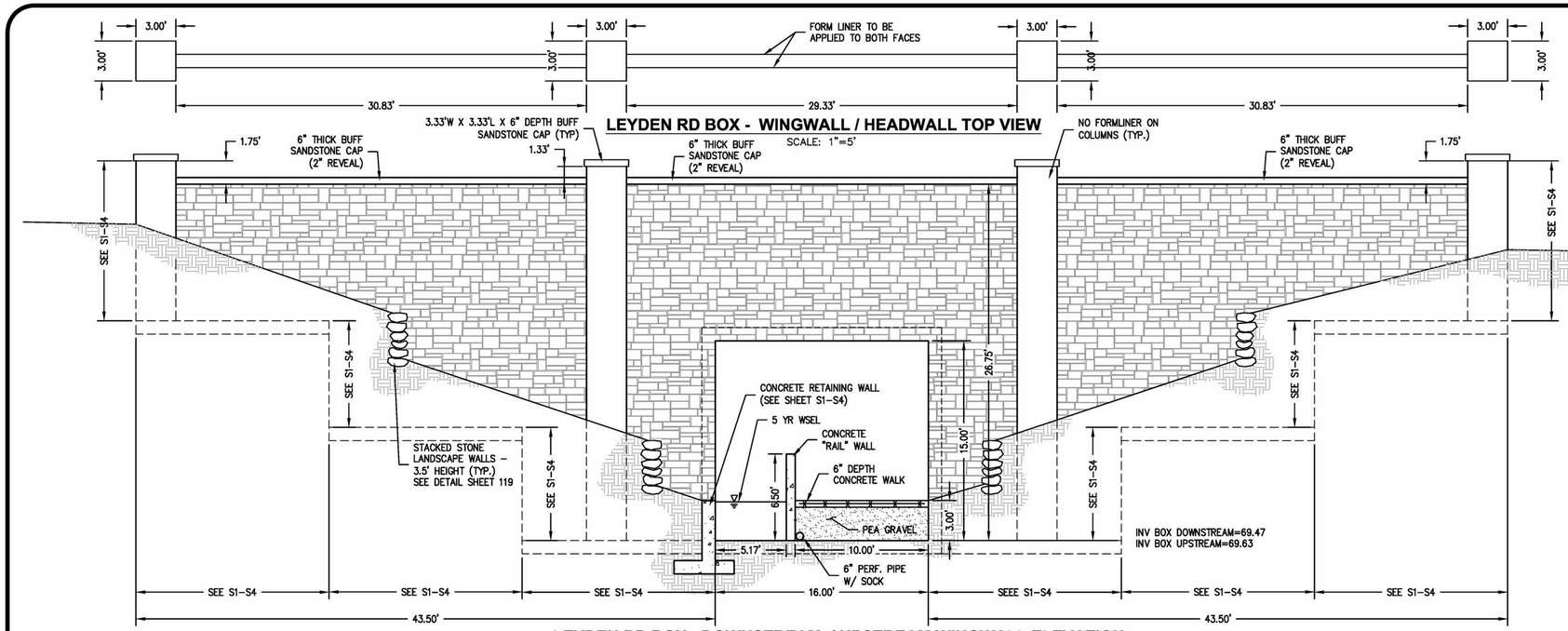

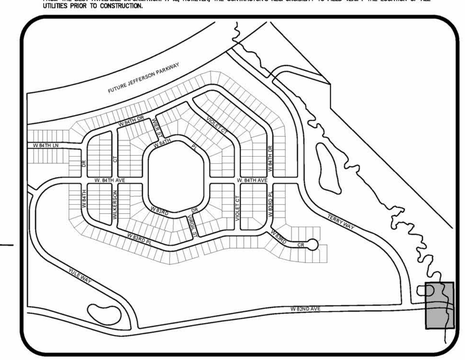

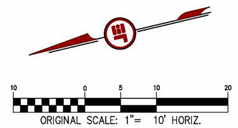

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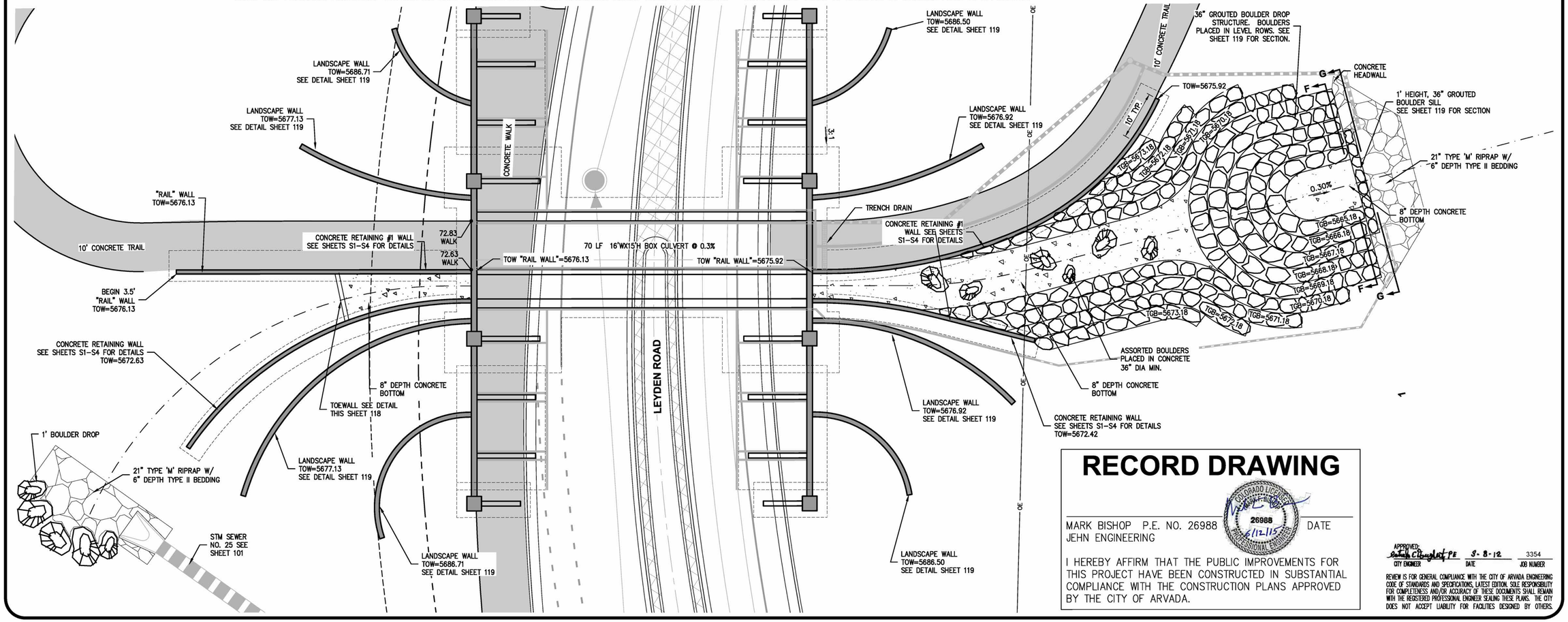
NOTE:

SEE STRUCTURAL PLANS PREPARED BY GEI INC. STRUCTURAL ENGINEERS FOR BOX CULVERT REINFORCING DETAILS,

AS-BUILTS



RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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COLORADO LICENSED — 26988 — 6/12/15 — PROFESSIONAL ENGINEER

APPROVED: _____ CITY ENGINEER — 8-8-12 DATE — 3354 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED — 12-15-14 — 33801 — PROFESSIONAL ENGINEER

JEHN ENGINEERING
3980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-0438

LEYDEN ROCK FILING 1
BARBARA GULCH
LEYDEN BOX CULVERT

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
----	----	F1-ASBUILTS	

JOB NUMBER: 2036-210-054
DATE: 02/17/2012
SCALE: 1" = 40'
SHEET NO: 117 OF 119

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LEYDEN ROCK

FILING NO. 2 CONSTRUCTION PLANS

**A PORTION OF THE SOUTHWEST QUARTER OF SECTION 19, T2S, R69W,
6TH P.M. CITY OF ARVADA, COUNTY OF JEFFERSON,
STATE OF COLORADO**

LEGAL DESCRIPTION:

BLOCK 14, LEYDEN ROCK, FILING NO. 1 SUBDIVISION
62.15± ACRES

BASIS OF BEARING:

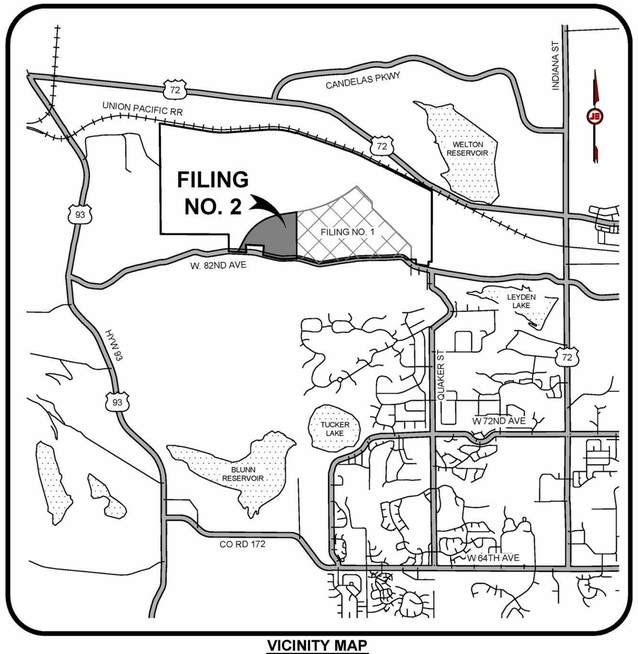
SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 27, TOWNWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M. BEARS N 88 DEGREES 45 MINUTES 01 SECONDS W

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS–DREXEL GROUP ALTA/ACSM SURVEY 7–21–06

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.



VICINITY MAP
NTS

SHEET INDEX:

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES SHEET
3	TYPICAL SECTIONS
4	OVERALL PHASING PLAN
5	PUBLIC IMPROVEMENT QUANTITIES
6	SITE UTILITY PLAN
7	OVERALL GRADING PLAN
8	DETAILED GRADING PLAN
	OVERLOT GRADING
9	OVERLOT TYPICAL SECTIONS
	SIGNAGE & STRIPING PLAN
10	SIGNING, LIGHTING & MAIL KIOSK PLAN
11	LEYDEN ROAD
	ROAD PLAN & PROFILE
12	ANTERO CT. & W. 84TH PL.
13	W. 84TH PL. - 2
14	W. 83RD DR. - 1
15	W. 83RD DR. - 2
16	W. 83RD DR. - 3
17	W. 84TH PL. - 3
18	ZIRCON ST.
19	YUCCA ST. & W. 84TH LANE
	W. 82ND AVENUE (LEYDEN ROAD)
20	PLAN AND PROFILE - 1
21	PLAN AND PROFILE - 2
22	PLAN AND PROFILE - 3
23	CROSS SECTIONS 1
24	CROSS SECTIONS 2
25	CROSS SECTIONS 3
26	CROSS SECTIONS 4
27	CROSS SECTIONS 5
	OVERALL WATER PLAN
28	WAT - 1
29	WAT - 2

SHEET NUMBER	SHEET TITLE
	SANITARY SEWER PLAN & PROFILE
30	OFFSITE SAN 1
31	OFFSITE SAN 2
32	ANTERO CT. & W. 84TH PL.
33	W. 84TH PL.
34	W. 83RD DR. - 1
35	W. 83RD DR. - 2
36	W. 84TH PL. - 3
37	ZIRCON ST.
38	YUCCA ST. & W. 84TH LN.
39	OFFSITE SAN - W. 83RD DR.
40	W. 82ND AVENUE SAN-1
41	W. 82ND AVENUE SAN-2
42	W. 82ND AVENUE SAN-3
	STORM SEWER PLAN & PROFILE
43	OFFSITE STM C1-1
44	OFFSITE STM C1-2
45	STM C1-C3
46	STM C4-C5
47	STM B1 & C7
48	POND D
49	POND H
50	STM B2, C6 & OFFSITE WQ POND

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A–100
CENTENNIAL, CO 80112
PHONE: 303–770–9111

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A–135
CENTENNIAL, CO 80112
PHONE: 303–224–9520

PUBLIC WORKS
CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE: 720–898–7644
CONTACT: TIM HOOS

ENGINEER
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: MARK BISHOP

SURVEYOR
JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PHONE: 303–423–6036
CONTACT: RAY ELKO

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE: 303–245–2219
CONTACT: RON MORTINEZ

FIRE PROTECTION
ARVADA FIRE PROTECTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001–0060
PHONE: 303–424–3012
FAX: 303–432–7995
CONTACT: STEVE STEIGLEDER

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT–OF–WAY
	PROPOSED SETBACK
	PROPOSED RIPRAP
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
S	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
100 LF 18" RCP	PROPOSED STORM SEWER LINE
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW–OFF
	PROPOSED GAS WELL HEAD
	PROPOSED WATERLINE PLUG FITTING WITH THRUST BLOCK
	PROPOSED WATERLINE ELBOW FITTING
TYPE C TYPE R	PROPOSED STORM SEWER INLET
	PROPOSED STORM SEWER FLARED END SECTION
	PROPOSED STORM SEWER MANHOLE
1.44 %	SLOPE PERCENTAGE AND DIRECTION

ABBREVIATIONS:

C&G	= CURB & GUTTER
℄ OR CL	= CENTER LINE
(106.2)	= EXISTING ELEVATION
FG	= FINISHED GRADE
℄ FL	= FLOW LINE
GB	= GRADE BREAK
HP	= HIGH POINT
INV	= INVERT ELEVATION
LP	= LOW POINT
ℙ OR PL	= PROPERTY LINE
106.02	= PROPOSED ELEVATION
ROW	= RIGHT–OF–WAY
TOC	= TOP OF CURB
TGB	= TOP OF GROUTED BOULDER
WALK	= FINISHED GRADE WALK
EOC	= EDGE OF CONCRETE
TOW	= TOP OF WALL
BOW	= BOTTOM OF WALL
AP	= ANGLE POINT
ESMT	= EASEMENT
EOA	= EDGE OF ASPHALT
EXIST.	= EXISTING
PROP.	= PROPOSED
HGL	= HYDRAULIC GRADE LINE

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
Patrick Clingerlet PE 3-8-12 3368
CITY ENGINEER DATE JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JeHN ENGINEERING
5690 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
COVER SHEET
prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: NTS
SHEET NO: 1 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILT\SET\01-0054-F2-CVR-081314.dwg, 6/15/2015 8:55:36 AM

TYPE

DESIGN INFORMATION

TYPICAL SECTION

MAJOR COLLECTOR

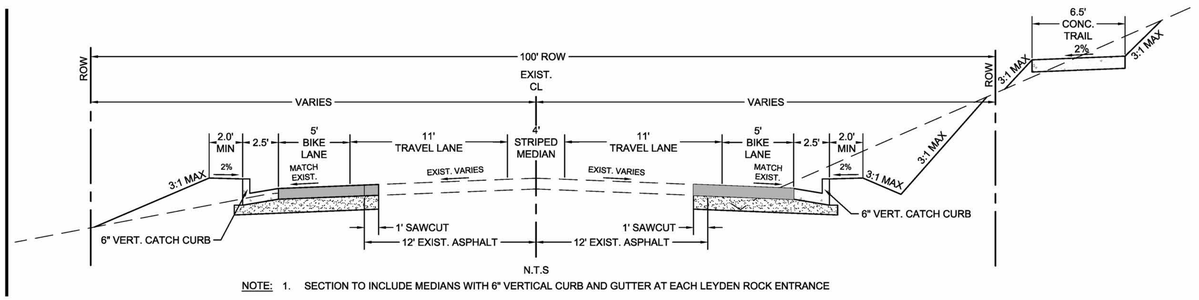
LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	NA	25' / 0.4' MIN FALL	NA

K VALUES	45 MPH DESIGN	MINIMUM
	CREST	80
	SAG	70



NOTE: 1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT EACH LEYDEN ROCK ENTRANCE

LOCAL
(PARKING BOTH SIDES)

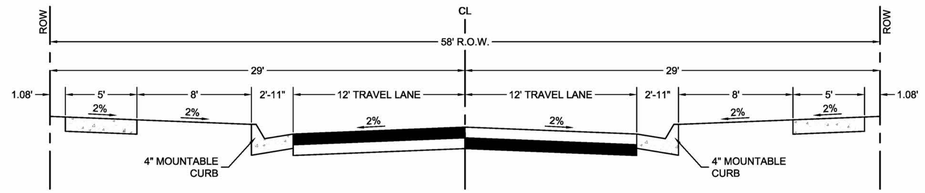
ROADS: W. 84TH LN.
YUCCA ST.
W. 83RD DR.
ZIRCON ST.
W. 84TH PL.
ANTERO CT.

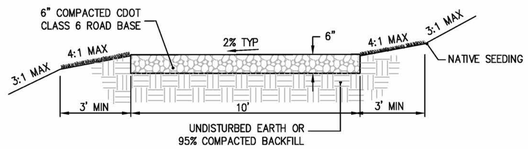
ROW WIDTH	58.0'
TRAFFIC VOLUMES	<1000 ADT
POSTED SPEED	25 - 30 MPH
MINIMUM CENTERLINE RADIUS	150.0'
MINIMUM TANGENT BETWEEN CURVES	NA
MAXIMUM GRADE	8.0 %

MAX GRADE AT INTERSECTION APPROACHES	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	4% FOR 35'	4% FOR 100'	4% FOR 200'

MINIMUM CURB RETURN RADIUS	W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
	18' / 0.3' MIN FALL	25' / 0.4' MIN FALL	30' / 0.4' MIN FALL

K VALUES	35 MPH DESIGN	MINIMUM
	CREST	40
	SAG	50





ACCESS MAINTENANCE ROAD DETAIL
NTS

NOTES:
1.) USE CASORON G-4, G-10 OR PENDULUM 2-G FOR WEED INHIBITOR

2.) SEE LANDSCAPE CONSTRUCTION PLANS FOR TRAIL SECTIONS.

AS-BUILTS

RECORD DRAWING

COLORADO LICENSED MARK BISHOP 26988 PROFESSIONAL ENGINEER 6/12/15

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED: CITY ENGINEER — DATE: 8-8-12 — 3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	ROJ

COLORADO REGISTERED 33801 PROFESSIONAL ENGINEER

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6039 FAX: (303) 467-9408

LEYDEN ROCK FILING NO. 2
TYPICAL STREET SECTIONS
prepared for RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: FASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: NTS
SHEET NO: 3 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ETK\3-0054-F2-TYP STR SEC-081314.dwg, 6/15/2015 8:54:07 AM

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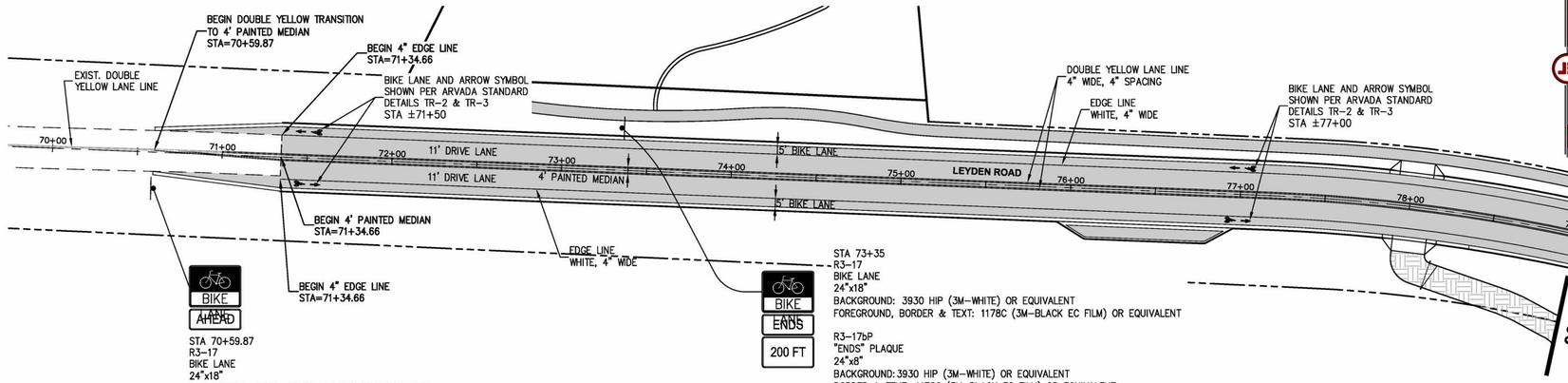


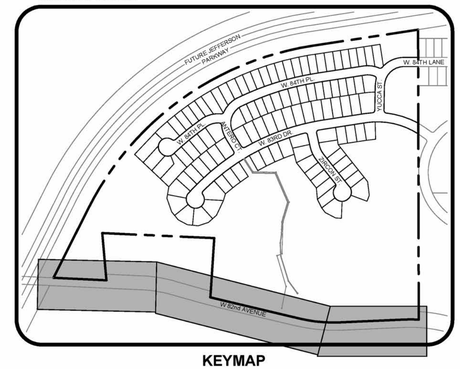
STA 70+59.87
R3-17
BIKE LANE
24"x18"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

R3-17aP
"AHEAD" PLAQUE
24"x8"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

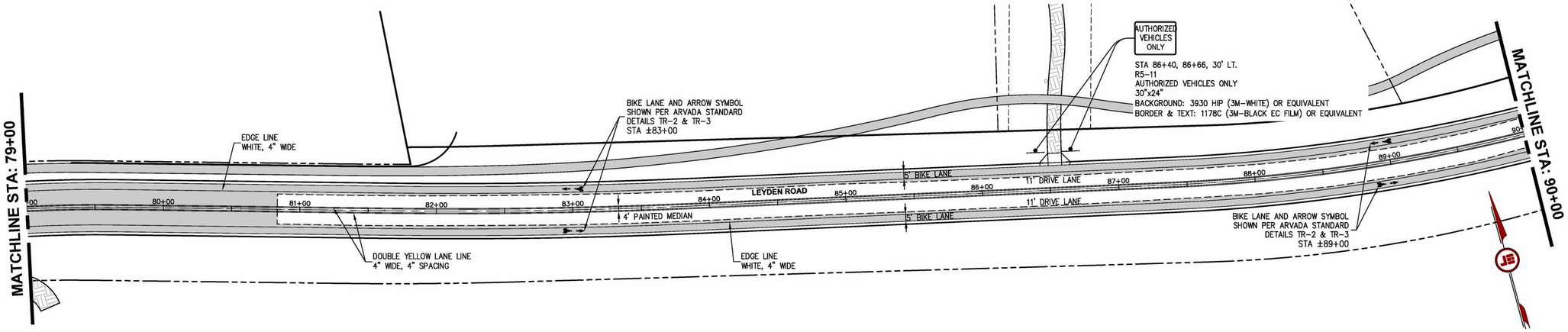
STA 73+35
R3-17
BIKE LANE
24"x18"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
FOREGROUND, BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

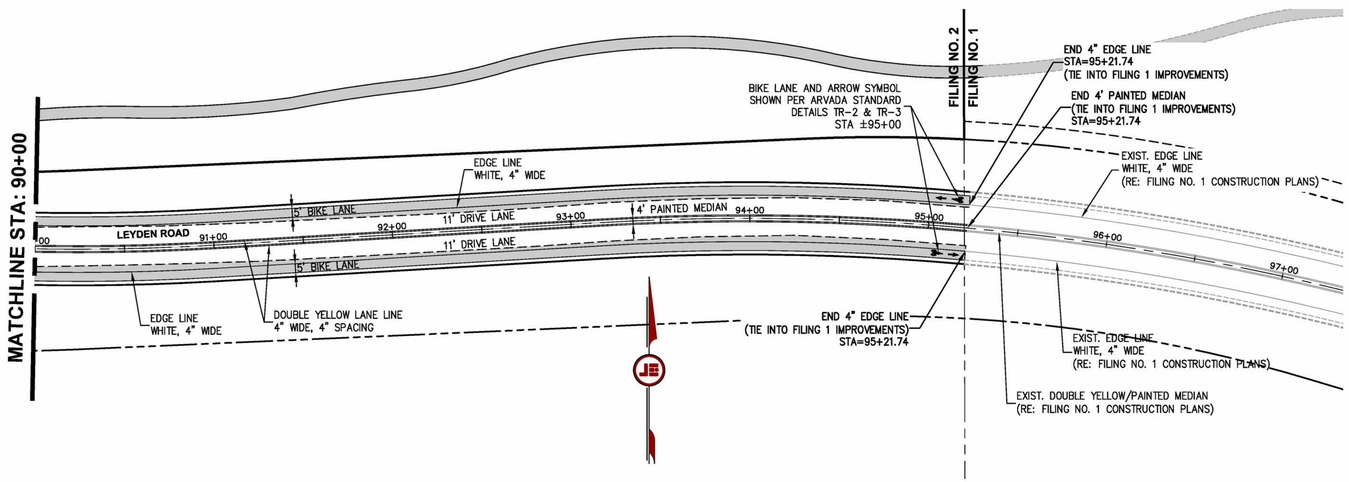
R3-17bP
"ENDS" PLAQUE
24"x8"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT

W16-2aP
DISTANCE PLAQUE "200 FT"
24"x12"
BACKGROUND: 3930 HIP (3M-WHITE) OR EQUIVALENT
BORDER & TEXT: 1178C (3M-BLACK EC FILM) OR EQUIVALENT



KEYMAP
N.T.S.





40 0 20 40 80
ORIGINAL SCALE: 1"= 40' HORIZ.

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

NOTES

1. POSTED SPEED LIMIT IS 40 MPH FOR LEYDEN ROAD.
2. ALL SPEED LIMIT SIGNS TO BE REMOVED AND RELOCATED.
3. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-3M TAPE, INLAID WITH OVERLAY.
4. ALL SIGNAGE AND STRIPING TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
5. LEYDEN STATIONING BASED ON LEYDEN ROAD PROPOSED CL ALIGNMENT.
6. ALL STREET BIKE LANE STRIPING SHALL BE PER THE ARVADA STANDARD DETAIL TR-2.
7. A BIKE LANE AND ARROW SYMBOL SHALL BE PLACED EVERY 600 FEET PER THE ARVADA STANDARD TR-3.

APPROVED: _____ 8-8-12 3111
CITY ENGINEER DATE JOB NUMBER

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5960 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

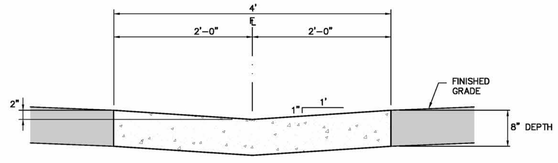
LEYDEN ROCK FILING NO. 2
SIGNING & STRIPING PLAN
LEYDEN ROAD

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: H:\594\2\ASBUILTS\SIGN.dwg
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 50'
SHEET NO: 11 OF 50

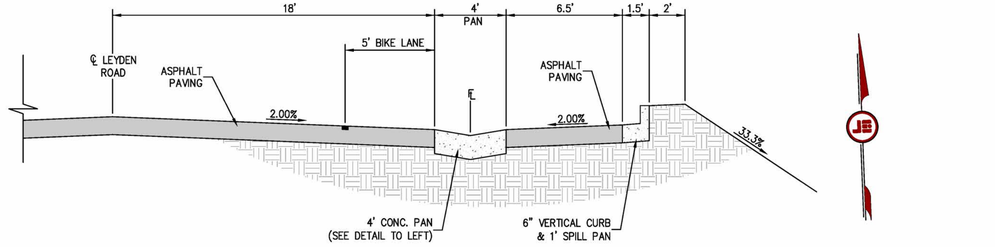
J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ST11-0054-F2-LR-SIGST-081314.dwg, 6/15/2015 9:17:45 AM



DETAIL NOTES:
1.) 1.5 LBS/CY FIBERMESH REQUIRED IN CONCRETE PAN
2.) CONTROL JOINTS PLACED AT 10' O.C.

4' CONCRETE PAN DETAIL

NTS



SECTION A-A

NTS

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

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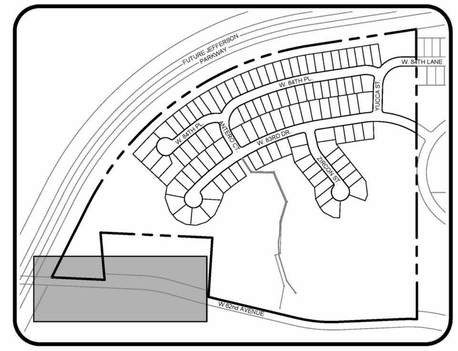
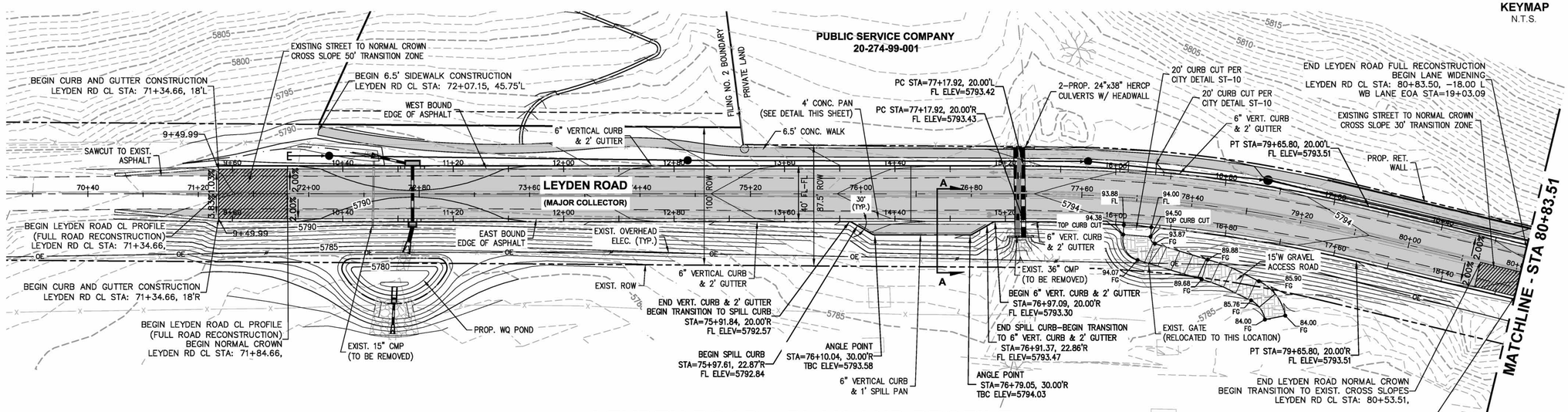
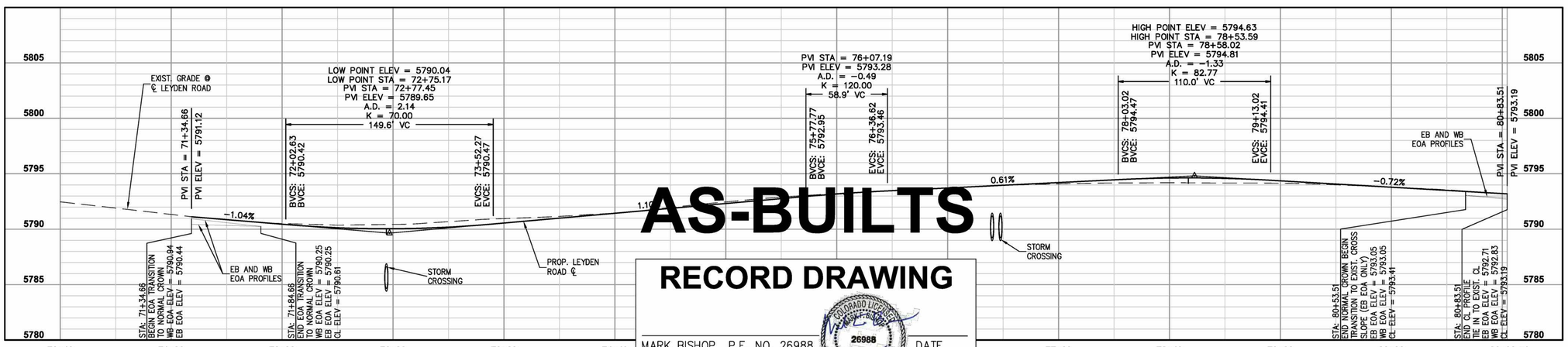


KEYMAP
N.T.S.



LEYDEN ROAD ℄ PLAN AND PROFILE
STA 70+40.00 TO 80+83.51



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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APPROVED:
CITY ENGINEER — DATE: 8-8-12 — 3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

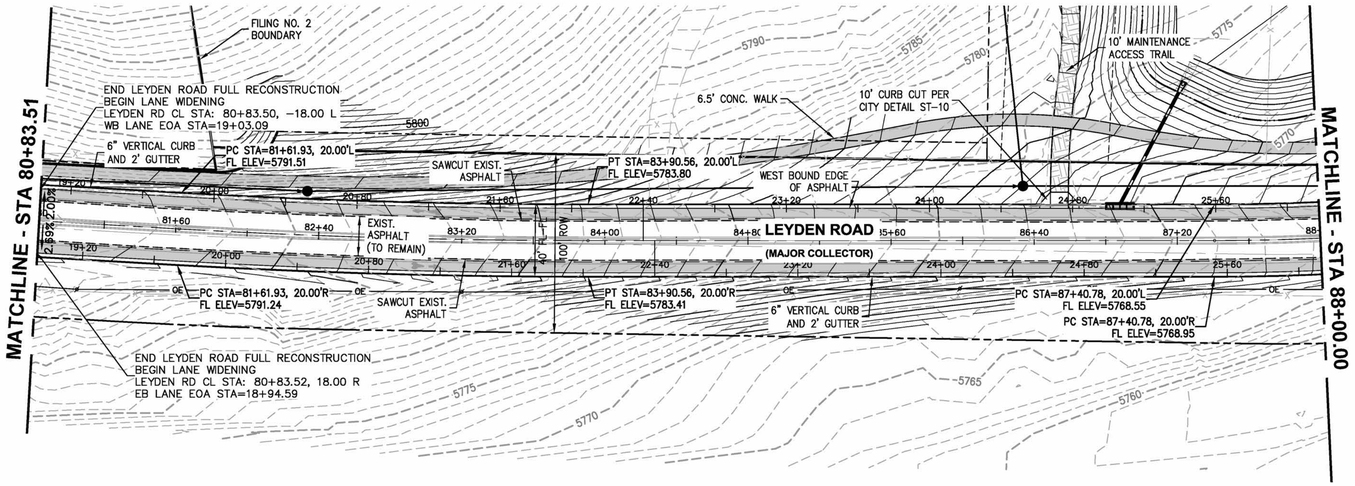
LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 1

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 20 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\TSTEN\20-00541-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:26:45 AM



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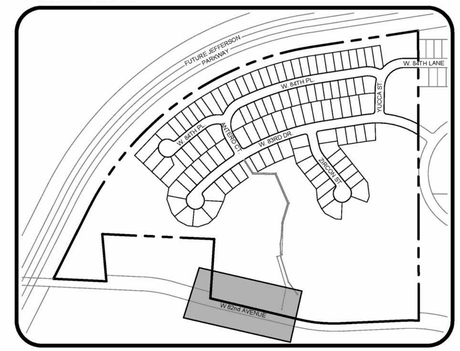
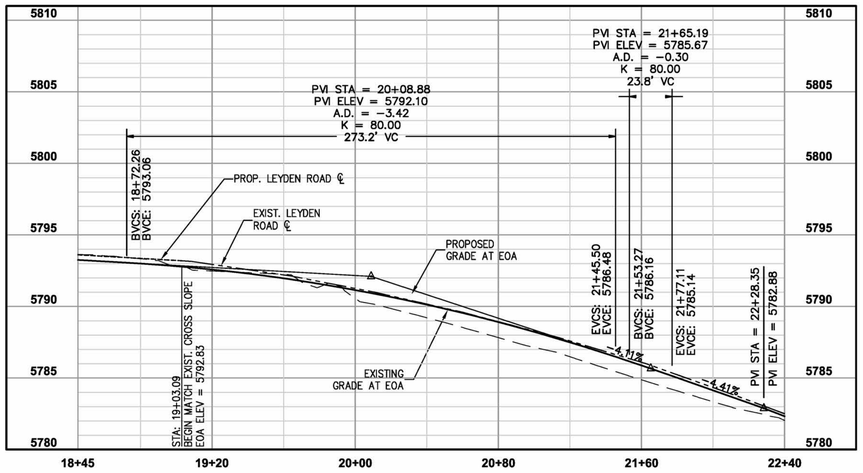
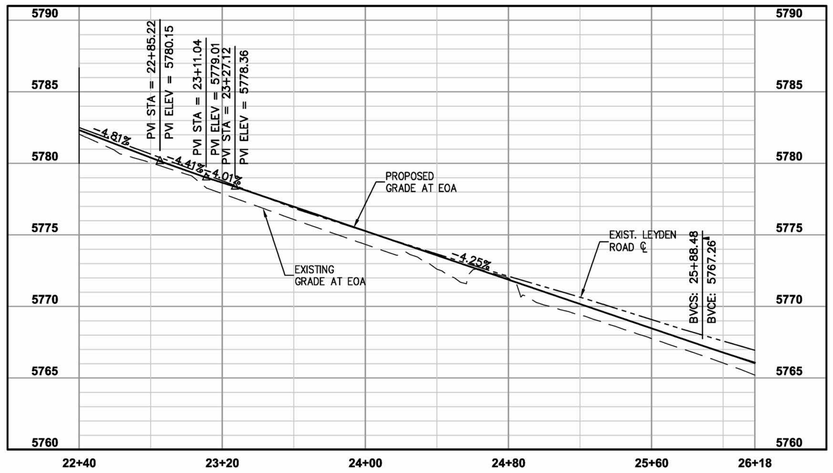


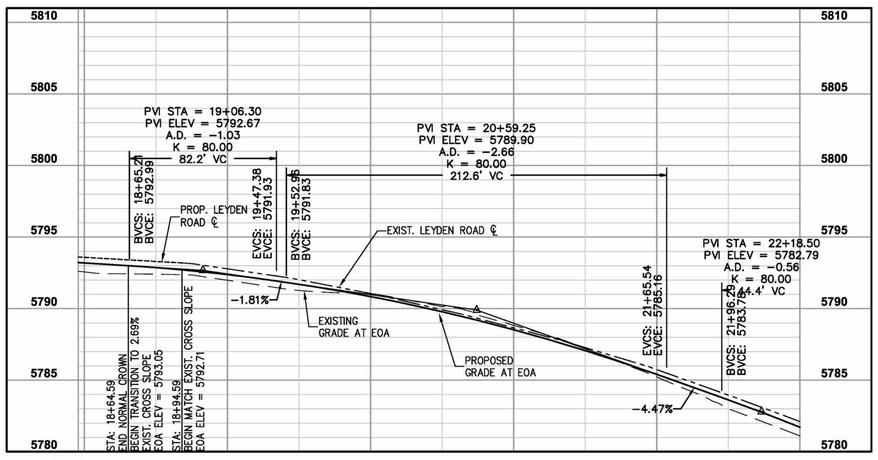
KEYMAP
N.T.S.

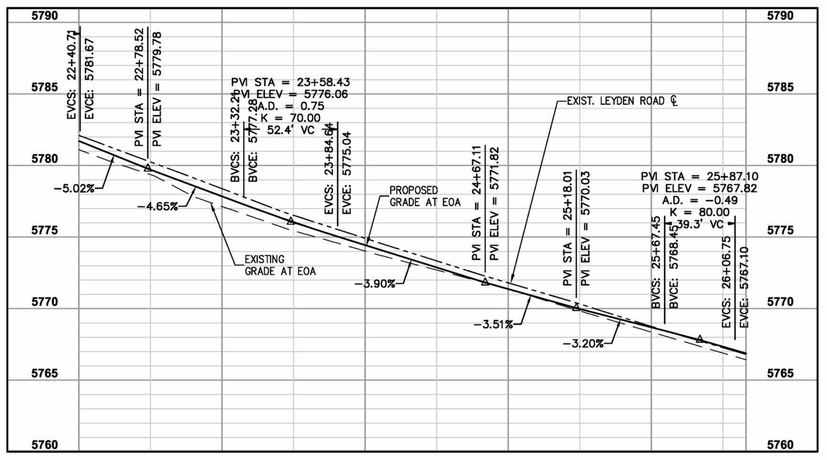
WEST BOUND LANE EDGE OF ASPHALT PROFILE





EAST BOUND LANE EDGE OF ASPHALT PROFILE





AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

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APPROVED: _____ CITY ENGINEER — 8-8-12 DATE — 3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
8680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-8208 FAX (303) 467-8438

LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 2

prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
BSS	BSS	P2-ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 21 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SUR\EYASBUILTSET\21-00S4-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:29:15 AM

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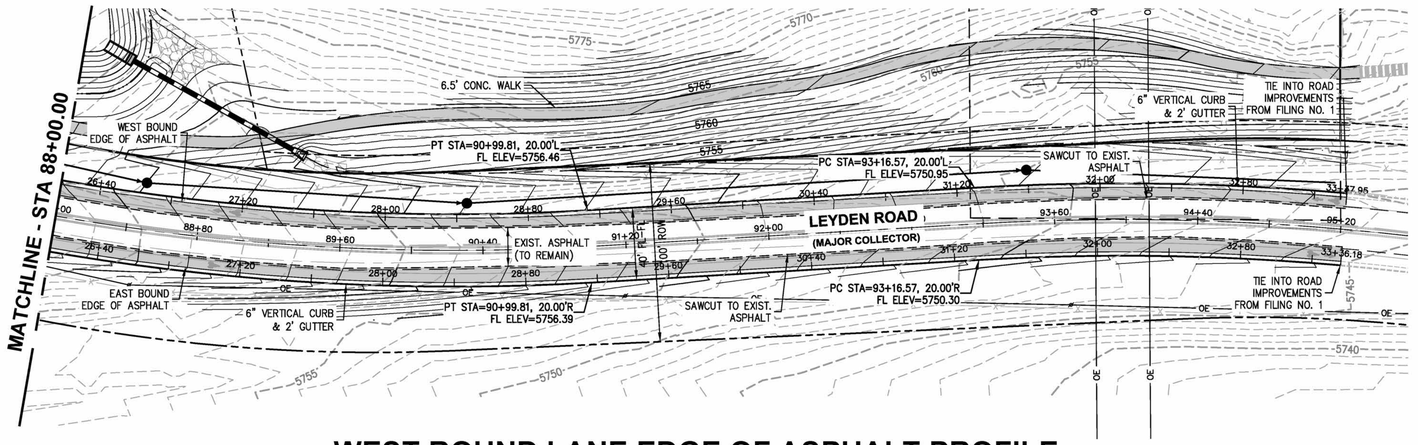
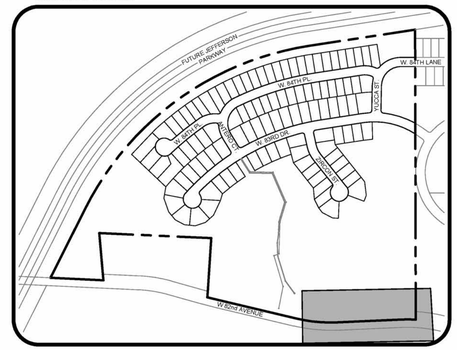
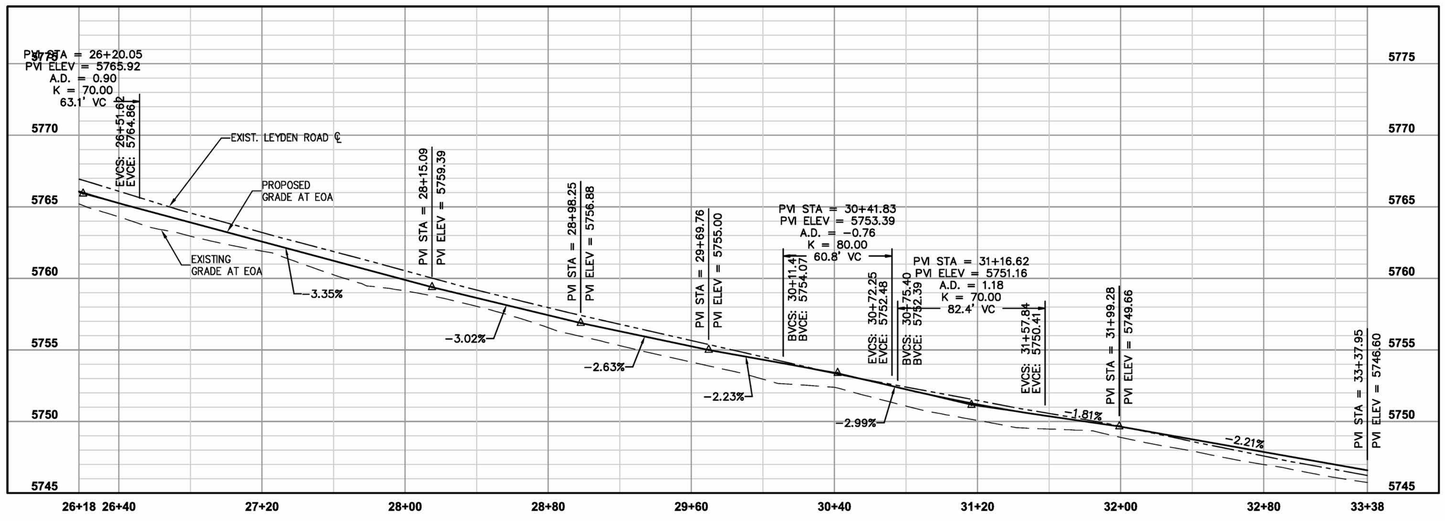




KEYMAP
N.T.S.

WEST BOUND LANE EDGE OF ASPHALT PROFILE



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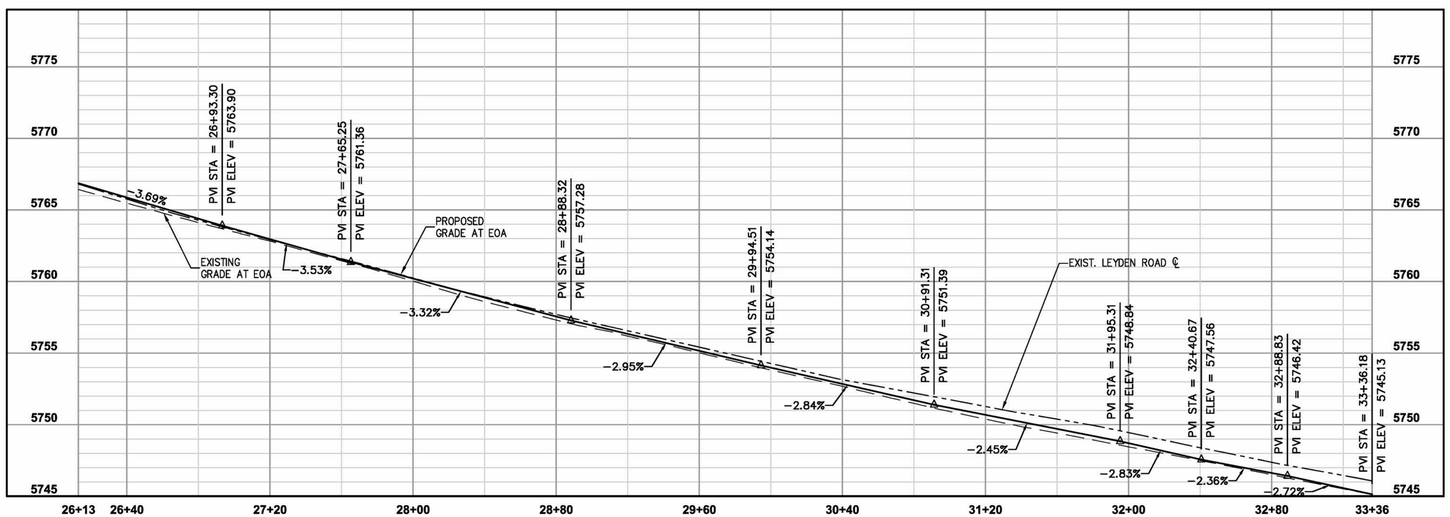

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 — DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

APPROVED:
CITY ENGINEER — DATE: 8-8-12 — JOB NUMBER: 3111

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDU

ORIGINAL SCALE: 1"= 40' HORIZ. 1"= 5' VERT.

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
W. 82ND AVENUE (LEYDEN ROAD)
PLAN & PROFILE - 3

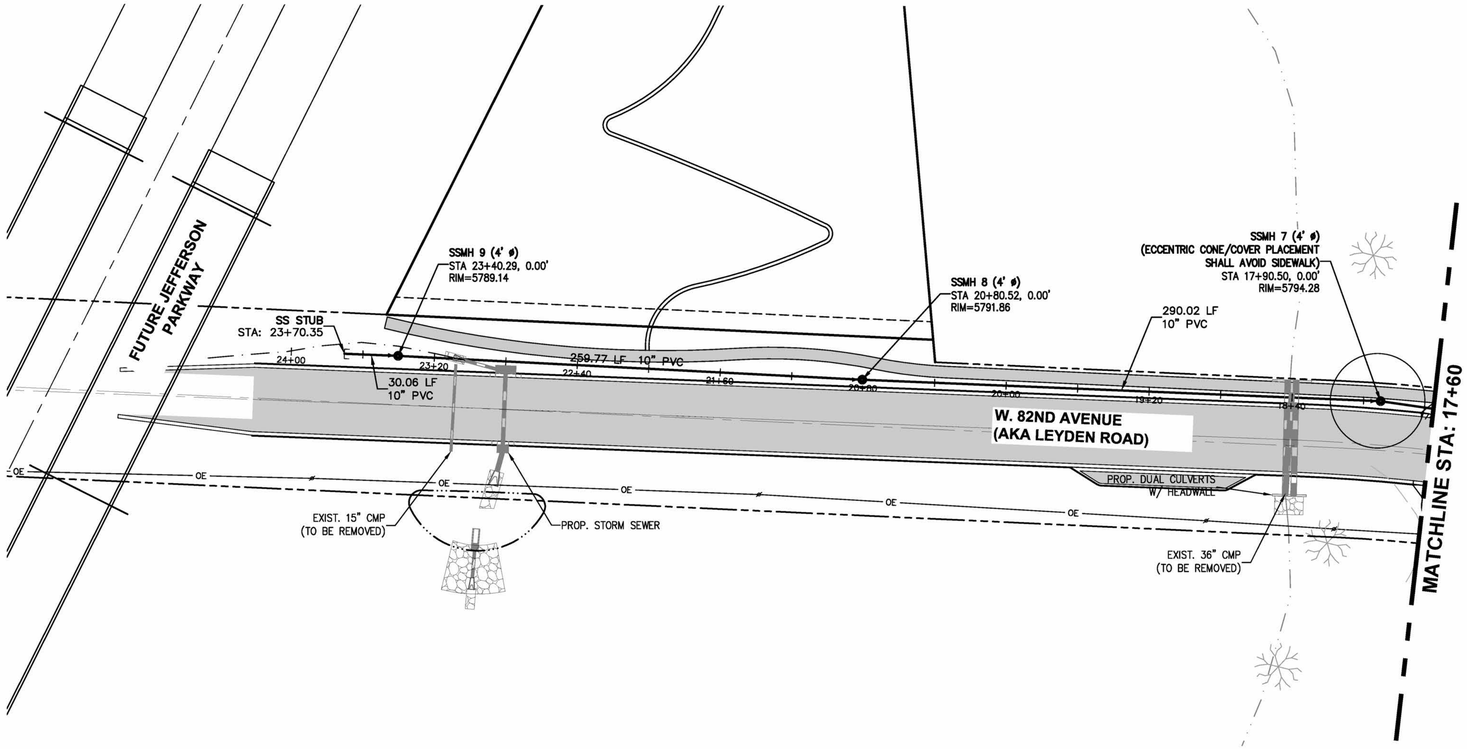
prepared for
RRCEA, LLC.

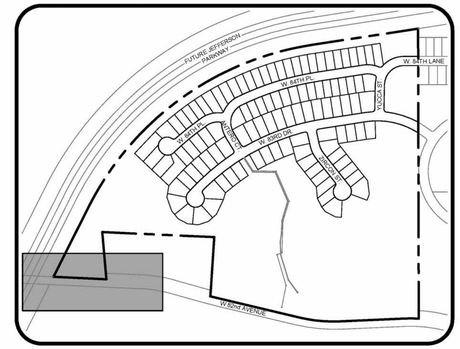
DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: F2ASBUILTS
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 22 OF 50

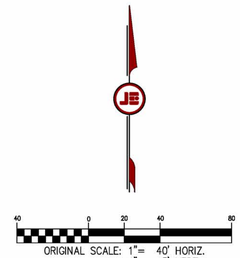
J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ET\22-0054-F2-82ND AVE P&P-081314.dwg, 6/15/2015 9:36:05 AM

JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



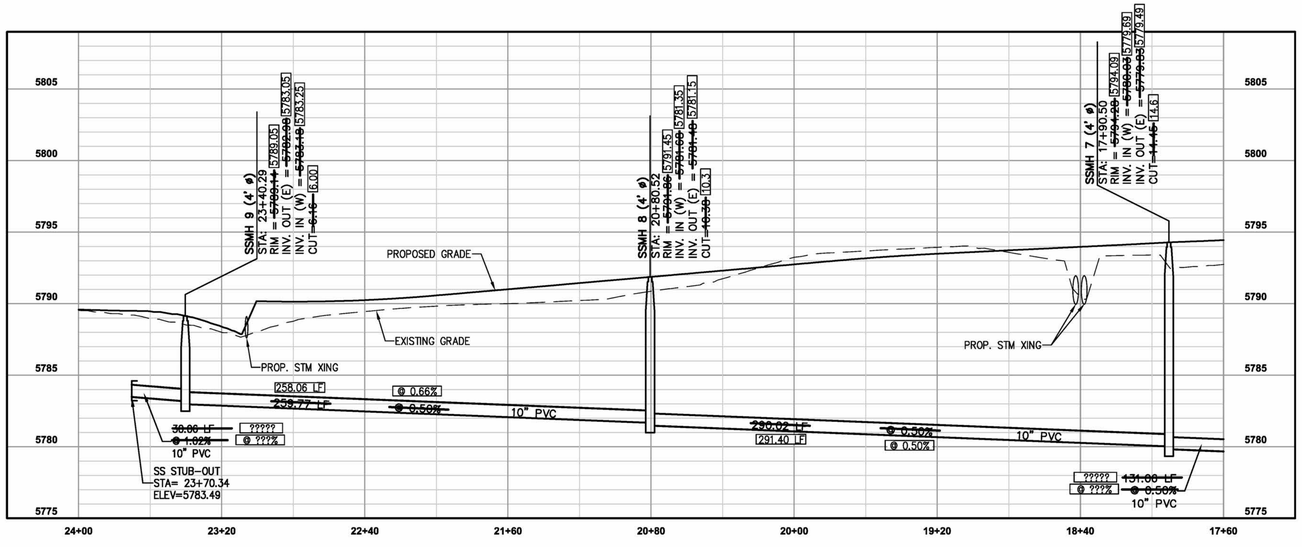


KEYMAP
N.T.S.



ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 10' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.
4. ALL MANHOLES GREATER THAN 15' DEPTH SHALL BE 5' DIAMETER.

APPROVED:
CITY ENGINEER — DATE: 3-8-12 — JOB NUMBER: 3111

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NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

REVISIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
9980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 1

prepared for
RRCEA, LLC

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
BSS	BSS	P2ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 40 OF 50

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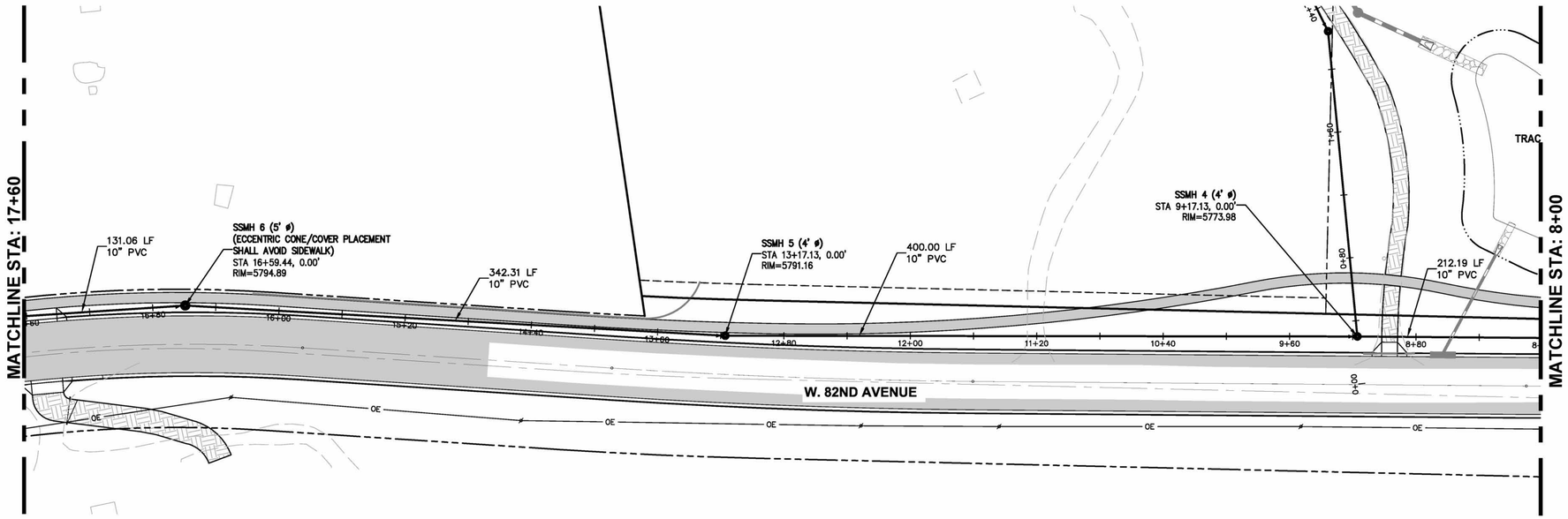
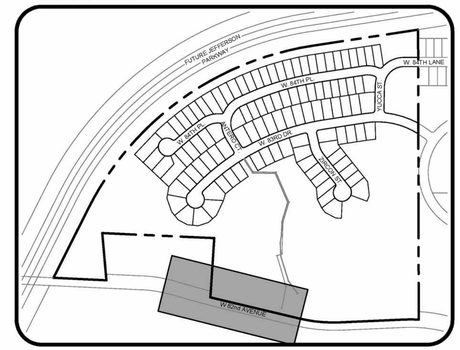
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.





KEYMAP
N.T.S.

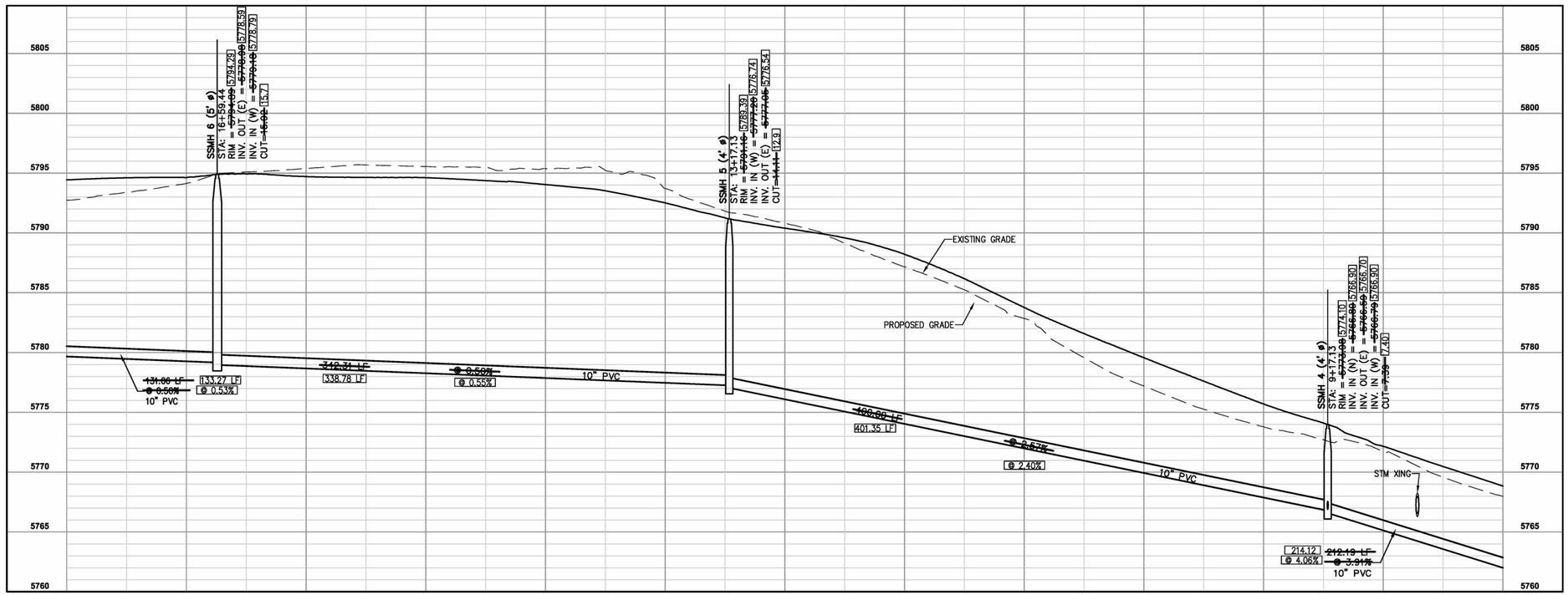
AS-BUILTS

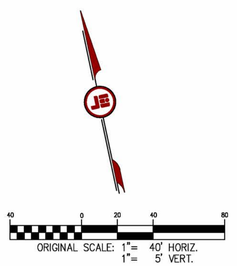
RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE





NOTES

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APPROVED:
CITY ENGINEER — DATE 8-8-12 — 3111 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6036 FAX (303) 467-9438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 2
prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: PASBUILTS
APPROVED BY:
JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 41 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SUR\EYASBUILTS\EYL41-0054-F2-82ND AVE-SAN1-081314.dwg, 6/15/2015 10:27:10 AM

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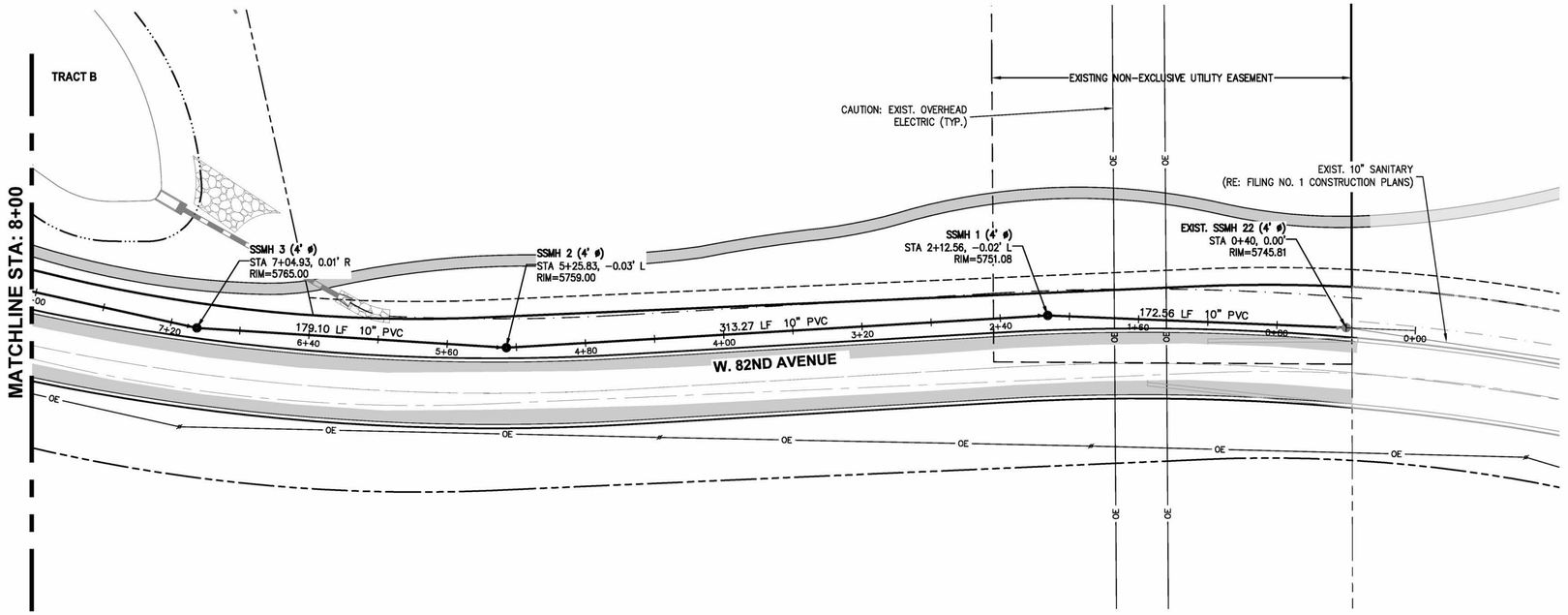
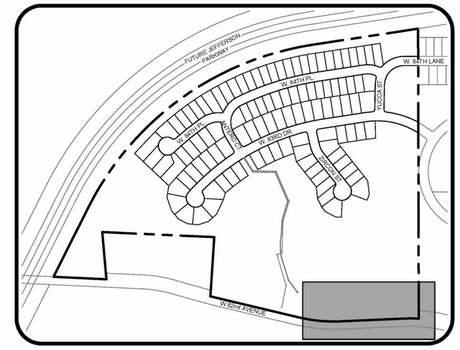
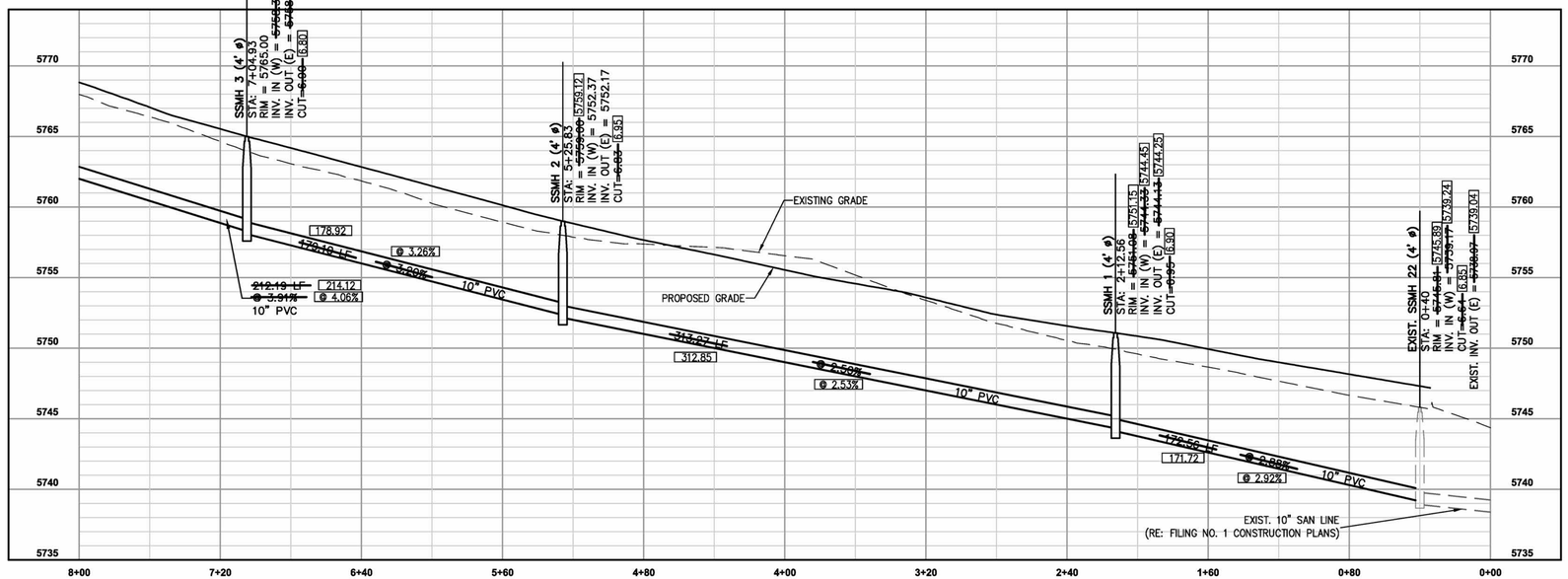




KEYMAP
N.T.S.

ORIGINAL SCALE: 1"= 40' HORIZ.
1"= 5' VERT.

W. 82ND AVENUE SANITARY SEWER PLAN AND PROFILE



AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

DATE

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CITY ENGINEER — DATE — JOB NUMBER 3111

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6036 FAX: (303) 467-0438

LEYDEN ROCK FILING NO. 2
SANITARY SEWER PLAN & PROFILE
W. 82ND AVENUE - SAN 3
prepared for
RRCEA, LLC.

DRAWN BY:	DESIGNED BY:	DRAWING NAME	APPROVED BY:
BSS	BSS	FASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 40'
SHEET NO: 42 OF 50

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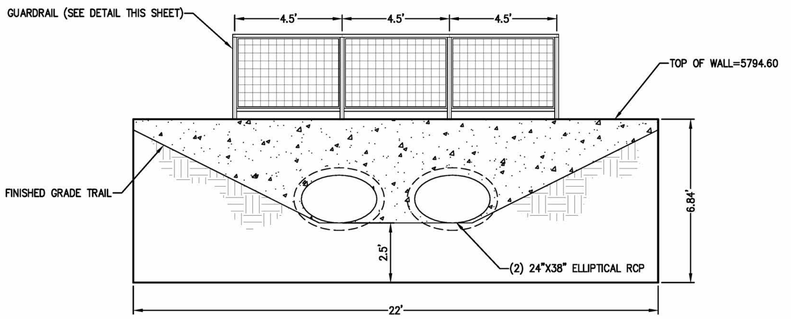
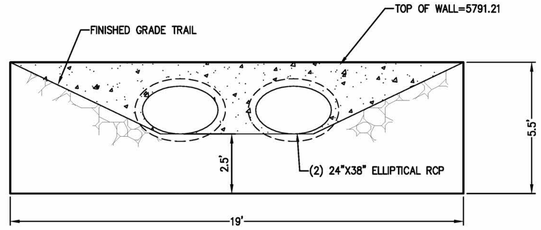
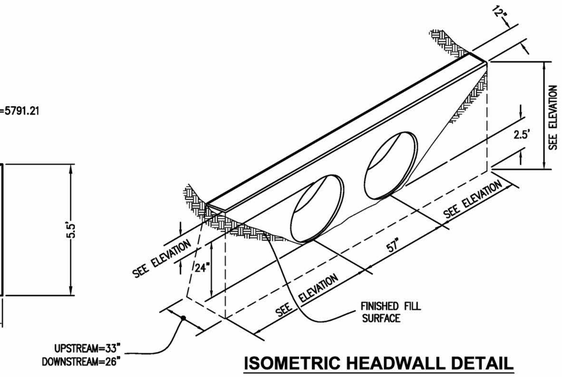


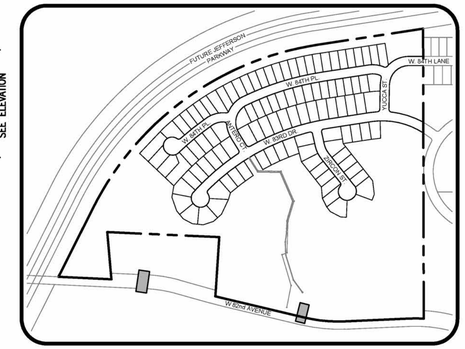
UPSTREAM HEADWALL ELEVATION
1"=3'



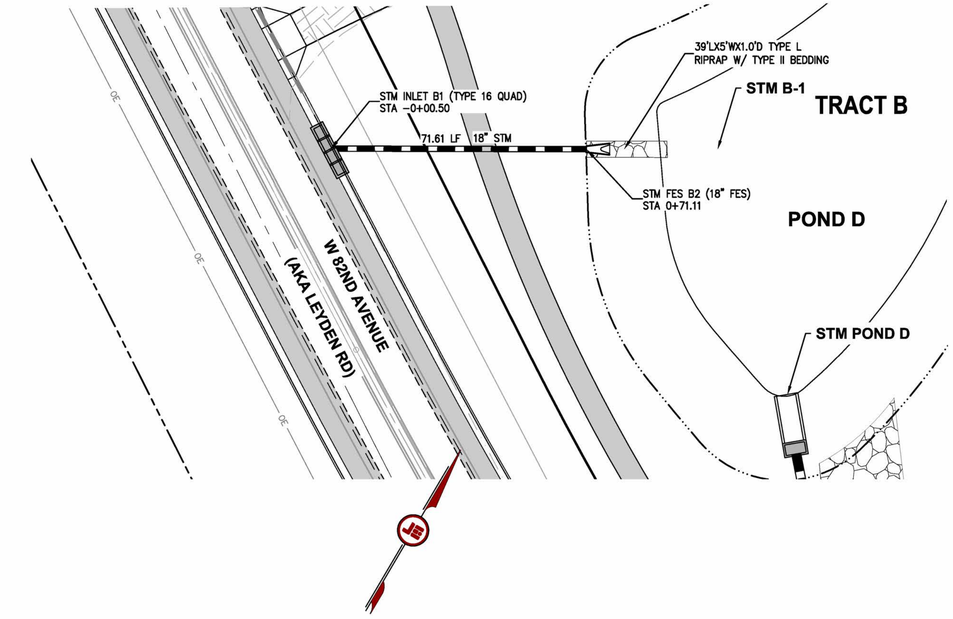
DOWNSTREAM HEADWALL ELEVATION
1"=3'



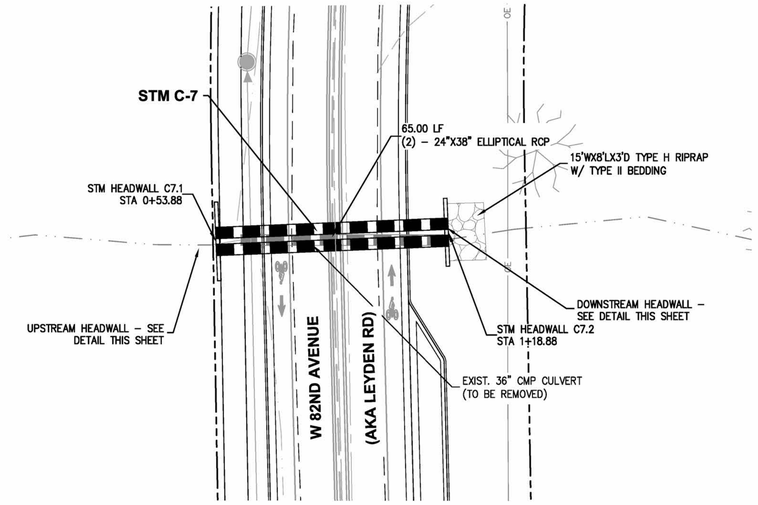
ISOMETRIC HEADWALL DETAIL
N.T.S.



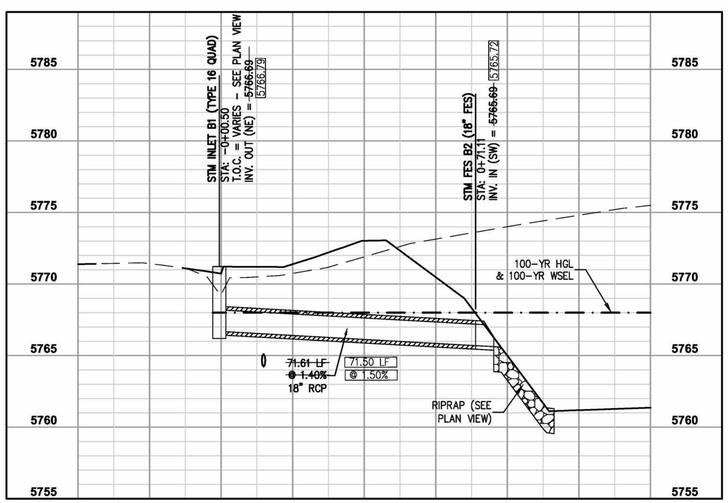
KEYMAP
N.T.S.

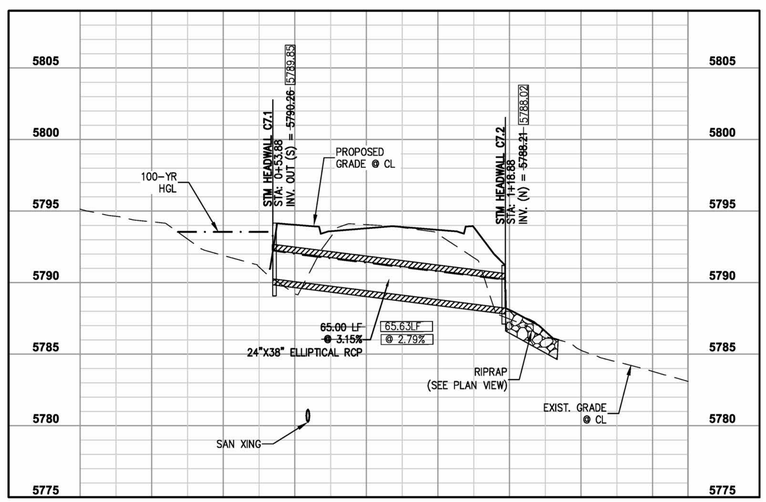


STM B-1

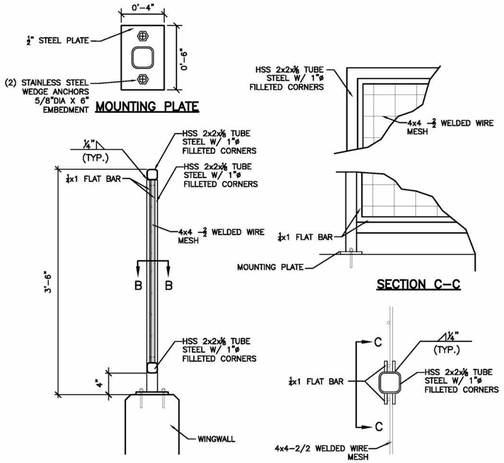


STM C7





20 0 10 20 40
ORIGINAL SCALE: 1"= 20' HORIZ.
1"= 5' VERT.



GUARDRAIL DETAIL
N.T.S.
NOTE: PAINT COLOR = BLACK

AS-BUILTS

RECORD DRAWING

MARK BISHOP P.E. NO. 26988 DATE
JEHN ENGINEERING

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

GENERAL NOTES

1. SEE CDOT STANDARD PLAN M-601-12 FOR GENERAL HEADWALL INFORMATION.
2. SEE CDOT STANDARD PLAN M-601-10 FOR REINFORCING OF HEADWALLS.
3. BACKFILL FROM HEADWALL TO HEADWALL WITH CLASS 1 STRUCTURAL FILL.

APPROVED: _____ CITY ENGINEER
8-8-12 DATE
3111 JOB NUMBER

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REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDU

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING JE
5980 WEBSTER STREET
ARVADA, CO 80002
PH. (303) 423-6039 FAX (303) 467-9438

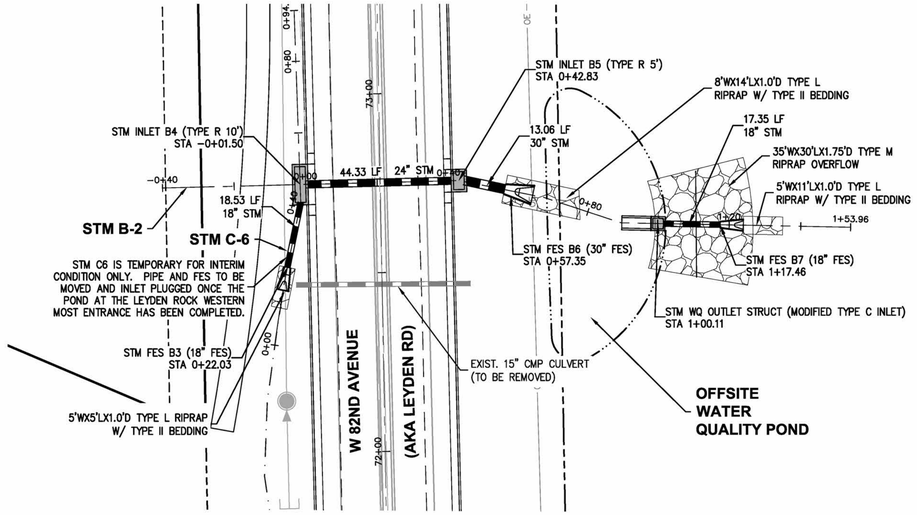
LEYDEN ROCK FILING NO. 2
STORM SEWER PLAN & PROFILE
STM B1 & C7

prepared for
RRCEA, LLC.

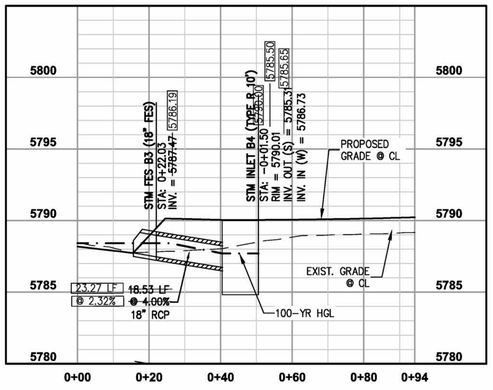
DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
BSS	BSS	F2ASBUILTS	

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 50'
SHEET NO: 47 OF 50

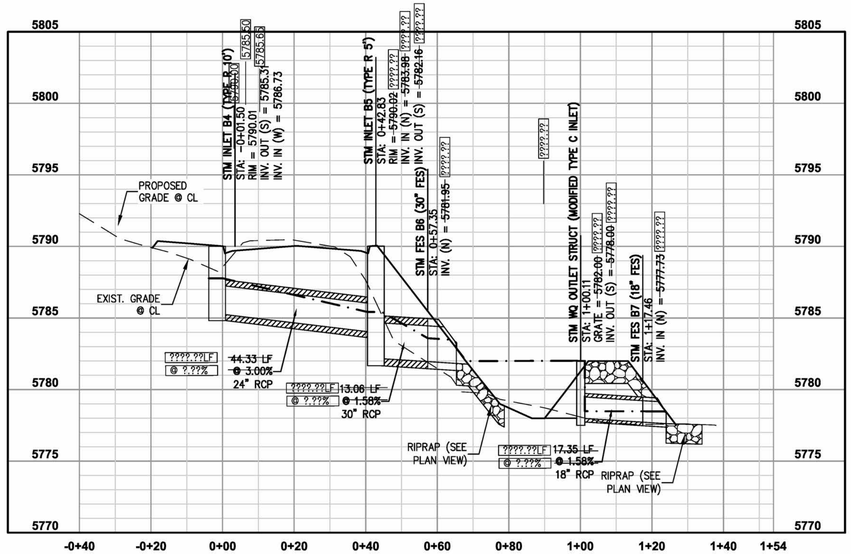
J:\2036\LEYDEN ROCK\211-074\F3-FDP\SUB\REV\ASBUILTS\ETM\47-0054-F2-B1&C7-STM-081314.dwg, 6/15/2015 10:38:35 AM

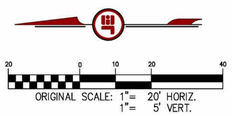


STM C6



STM B2





AS-BUILTS

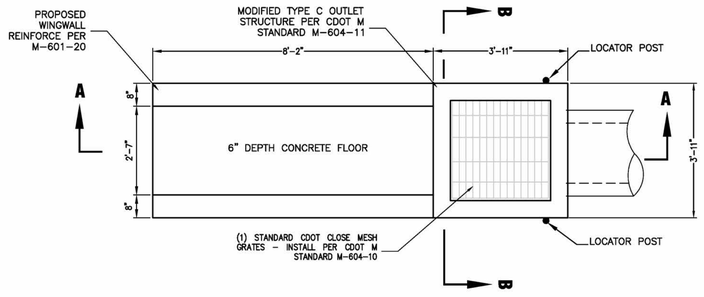
RECORD DRAWING

MARK BISHOP P.E. NO. 26988
JEHN ENGINEERING

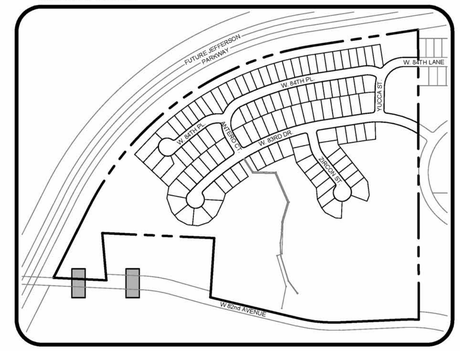
DATE

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THIS PROJECT HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

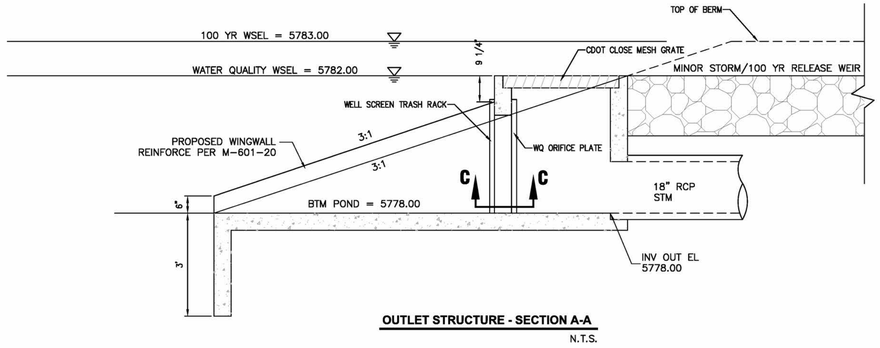
JEHN ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



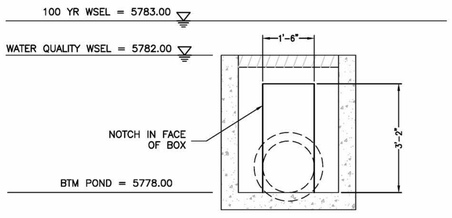
OUTLET STRUCTURE - PLAN VIEW
N.T.S.



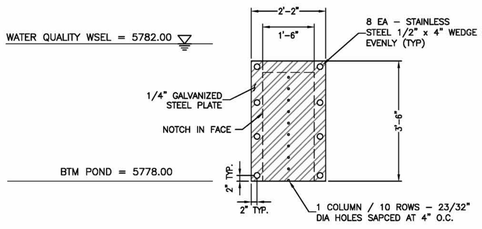
KEYMAP
N.T.S.



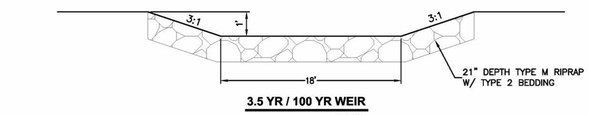
OUTLET STRUCTURE - SECTION A-A
N.T.S.



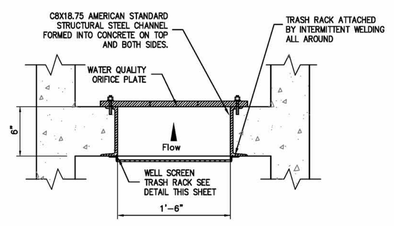
OUTLET STRUCTURE - SECTION B-B
N.T.S.

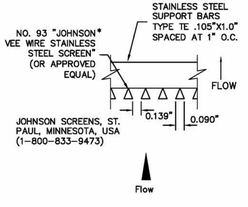


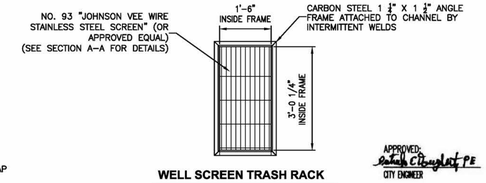
WATER QUALITY ORIFICE PLATE
N.T.S.



3.5 YR / 100 YR WEIR
N.T.S.







WELL SCREEN TRASH RACK
N.T.S.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER 3111

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JEHN ENGINEERING & IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF JEHN ENGINEERING.

REVISIONS

NO	DESCRIPTION	DATE	BY
1	AS-BUILTS	12/15/14	PDJ

COLORADO REGISTERED PROFESSIONAL ENGINEER 33801

JEHN ENGINEERING
5680 WEBSTER STREET
ARVADA, CO 80002
PH: (303) 423-6236 FAX: (303) 487-9438

LEYDEN ROCK FILING NO. 2
STORM SEWER PLAN & PROFILE
STM B2, C6 & OFFSITE WQ POND

prepared for
RRCEA, LLC.

DRAWN BY: BSS
DESIGNED BY: BSS
DRAWING NAME: 7408015
APPROVED BY:

JOB NUMBER: 2036-212-007
DATE: JUNE 2012
SCALE: 1" = 20'
SHEET NO: 50 OF 50

J:\2036\LEYDEN ROCK\211-074-F3-FDP\SURVEY\ASBUILTS\ET150-0054-F2-B2&C6 STM-081314.dwg, 6/15/2015 10:41:47 AM

~~CONSTRUCTION PLANS~~ **RECORD DRAWINGS**

LEYDEN ROCK SUBDIVISION, FILING NO. 5

BLOCK 12 OF LEYDEN ROCK SUBDIVISION FILING NO. 1
A PORTION OF SECTIONS 22, 23, 26, AND 27, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

BASIS OF BEARING:

BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 27 BEARS N 89°44'54" W AND MONUMENTED AS FOLLOWS:

- THE WEST QUARTER CORNER OF SECTION 27 BEING A FOUND 2" BRASS CAP MARKED "PLS 11434 1999 5881.08" IN 4"X4" SQUARE CONCRETE POST 1.4" BELOW GROUND LEVEL.
- THE CENTER QUARTER CORNER OF SECTION 27 BEING A FOUND NO. 6 REBAR W/ 3.25" ALUMINUM CAP MARKED "PLS 13258 1997" 0.2' ABOVE GROUND LEVEL.

VERTICAL DATUM - SITE BENCHMARK:

NAVD '88, NGS CONTROL MONUMENT DESIGNATION "K 408" 3.25" BRASS CAP STAMPED "NATIONAL GEODETIC SURVEY K 408 1984" SET IN ROCK OUTCROP 2.5' ABOVE GROUND. ELEV. = 5899.24 FEET.

THE MONUMENT IS LOCATED 0.2 MILES FROM HIGHWAY 93 EAST ALONG LEYDEN ROAD, IN THE NORTHWEST CORNER OF A 100' BY 400' EXPOSED AREA OF OUTCROPPING BEDROCK, 125' EAST OF THE CENTER OF A DRIVEWAY AND GATE, 29' SOUTH OF THE CENTER OF THE ROAD, 9' SOUTH OF THE NORTH EDGE OF THE LEDGE, AND 4' EAST OF THE WEST EDGE OF THE LEDGE. THE MARK IS 1' NORTH FROM THE WITNESS POST AND 3' ABOVE THE ROAD.

HORIZONTAL DATUM:

COLORADO STATE PLANE COORDINATES, CENTRAL ZONE, NAD '83, NGS CONTROL MONUMENT DESIGNATION "BARBARA". PROVIDED BY CIVILARTS-DREXEL GROUP ALTA/ACSM SURVEY 7-21-06

LEGAL DESCRIPTION:

BLOCK 12, LEYDEN ROCK SUBDIVISION FILING NO. 1, A SUBDIVISION RECORDED AT RECEPTION NUMBER 2012078338 AND LOCATED IN SECTIONS 22, 23, 26 AND 27, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO.

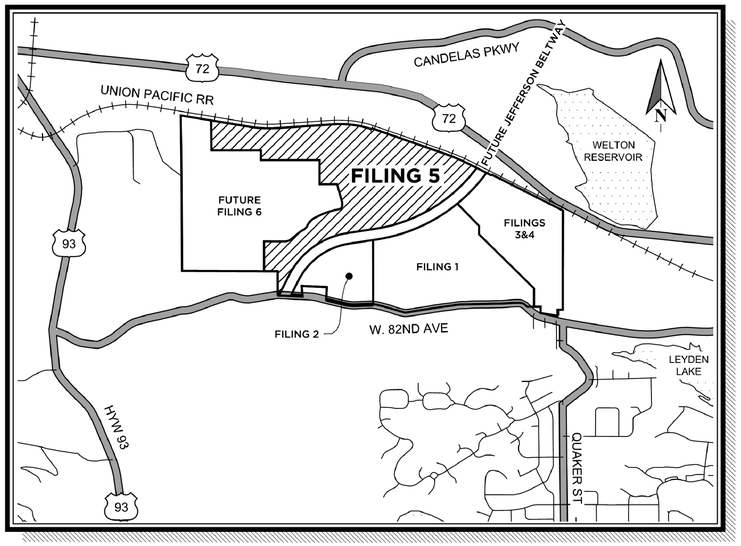
THE ABOVE DESCIBED PARCEL CONTAINS AN AREA OF 12,929,312 SQUARE FEET OR 296.816 ACRES MORE OR LESS.

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED KENNETH PAUL TOLAND 12-23-16 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE



VICINITY MAP

1" = 2000'

SHEET INDEX:

SHEET #	SHEET TITLE
01	COVER SHEET
02	NOTES SHEET
03	TYPICAL STREET SECTIONS 1 OF 2
04	TYPICAL STREET SECTIONS 2 OF 2
05	PUBLIC IMPROVEMENT QUANTITIES
06	OVERALL UTILITY PLAN
07	PHASING PLAN
	OVERLOT GRADING
08	OVERALL GRADING PLAN
09	LOT GRADING - SHEET 1
10	LOT GRADING - SHEET 2
11	LOT GRADING - SHEET 3
12	TYPICAL OVERLOT TEMPLATES
	SIGNAGE & STRIPING
13	ONSITE - SHEET 1
14	ONSITE - SHEET 2
15	ONSITE - DETAILS
16	LEYDEN ROAD
	ROAD PLAN & PROFILES
17	LEYDEN ROAD
18	LEYDEN ROAD MEDIANS
19	WEST 87TH DRIVE
20	WEST 87TH DR & LEYDEN ROCK DR
21	LEYDEN ROCK DRIVE - SHEET 1
22	LEYDEN ROCK DRIVE - SHEET 2
23	LEYDEN ROCK DIRVE - SHEET 3
24	CULEBRA STREET - SHEET 1
25	CULEBRA STREET - SHEET 2
26	WEST 85TH DRIVE - SHEET 1
27	WEST 85TH DRIVE - SHEET 2
28	WEST 85TH DRIVE - SHEET 3
29	YUCCA STREET
30	ZIRCON WAY - SHEET 1
31	ZIRCON WAY - SHEET 2
32	ZIRCON WAY - SHEET 3
33	WEST 86TH AVENUE
34	YULE STREET
35	WEST 87TH AVENUE - SHEET 1
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37	WINDY STREET
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40	WEST 84TH AVENUE
41	WEST 84TH DRIVE
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74	WILKERSON STREET
75	WEST 86TH LANE
76	WEST 86TH AVENUE
77	YULE STREET
78	WINDY STREET
	STORM PLAN & PROFILES
79	STORM 1, 4, AND 5
80	STORM 2 (STA 0+00 - STA 7+60)
81	STORM 2 (STA 7+60 - STA 13+19)
82	STORM 3 (STA 0+00 - STA 8+80)
83	STORM 3 (STA 8+80 - STA 14+28)
84	STORM 6, 9, AND 10
85	STORM 7
86	STORM 8 (STA 0+00 - STA 8+50)
87	STORM 8 (STA 8+50 - STA 11+00)
88	STORM 11 (STA 0+00 - STA 7+50)
89	STORM 11 (STA 7+50 - STA 14+90)
90	STORM 12, 13, AND 14
91	STORM 16 (STA 0+00 - STA 6+60)
92	STORM 16 (STA 6+60 - STA 13+38)
93	STORM 15 & 17 AMENDED SHEET
94	STORM 18, 19 and 20
95	STORM 21, 22, 23, AND 24
96	AREA DRAIN 1
97	AREA DRAIN 2
	BARBARA GULCH
98	PLAN & PROFILE (BARBARA GULCH IMPROVEMENTS NOT COMPLETED AS OF 12.23.2016)
	STORM DETAILS
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100	POND F OUTLET STRUCTURE
101	POND G OUTLET STRUCTURE
102	STM 2 POND OUTLET HEADWALL DETAIL

REFERENCE SHEETS

103	PARKWAY DRAIN EXTENSION
104	PARKWAY GRADING ASBUILTS
105	SUBEX DRAINS 1 OF 2
106	SUBEX DRAINS 2 OF 2

LIST OF CONTACTS:

PROJECT DEVELOPER
RRCEA, LLC.
7353 SOUTH ALTON WAY STE A-100
CENTENNIAL, CO 80112
PHONE: 303-770-9111

ENGINEER
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: KEN TOLAND, PE

FIRE PROTECTION
ARVADA FIRE PROETCTION DISTRICT
6503 SIMMS STREET
ARVADA, CO 80001-0060
PHONE:303-424-3012
FAX:303-432-7995
CONTACT:STEVE STEIGLEDER

PLANNING CONSULTANT
CONSILIUM DESIGN
7353 SOUTH ALTON WAY STE A-135
CENTENNIAL, CO 80112
PHONE: 303-224-9520

SURVEYOR
KT ENGINEERING
12500 58TH AVENUE, SUITE 230
ARVADA, CO 80002
PHONE: 720-638-5190
CONTACT: CHRIS McELVAIN, PLS

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CITY OF ARVADA
8101 RALSTON RD.
ARVADA, CO 80001
PHONE:720-898-7644
CONTACT:TIM HOOS, PE

GAS & ELECTRIC
XCEL ENERGY
2655 N. 63RD
BOULDER, CO, 80301
PHONE:303-245-2219
CONTACT:RON MORTINEZ

LEGEND:

5400	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
E	EXISTING ELECTRIC UTILITY LINE
	EXISTING UTILITY POLE
	EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS UTILITY LINE
	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
5400	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED BOUNDARY LINE
	PROPOSED CENTER LINE
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT-OF-WAY
	PROPOSED SETBACK
100 LF 8" SAN	PROPOSED SANITARY SEWER LINE
SS STA: 1+00.00	PROPOSED SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED UNDERDRAIN
100 LF 18" RCP	PROPOSED STORM SEWER LINE
	PROPOSED TYPE R INLET
	PROPOSED TYPE 16 INLET
	PROPOSED BOX BASE MANHOLE
	PROPOSED CIRCULAR MANHOLE
	PROPOSED FLARED END SECTION
	PROPOSED RIPRAP
100 LF 8" WAT	PROPOSED WATER LINE
	PROPOSED WATER SERVICE AND METER
	PROPOSED IRRIGATION SERVICE AND METER
	PROPOSED WATER GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED REDUCER
	PROPOSED BLOW-OFF
	PROPOSED BEND W/ THRUST BLOCK
	PROPOSED CROSS
	PROPOSED TEE
	PROPOSED AIR RELEASE VALVE
	PROPOSED PRESSURE REDUCING VALVE
	PROPOSED 100 YR WATER SURFACE ELEVATION
	PROPOSED FLOWLINE SWALE

APPROVED: Patrick E. Douglass PE — CITY ENGINEER — 12-12-13 DATE — 3385 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
4.			
5.			
6.			
7.			
8.			

STAMP: COLORADO REGISTERED KENNETH PAUL TOLAND 12-3-15 33801 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROCK - FILING 5
COVER SHEET

PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = NA'
SUBMITTED ON: 07/22/2013

01 OF 102

J:\2013\LEYDEN ROCK\LEYDEN-FIL-FDP\CIVIL\CONSTRUCTION\LEYDEN-FIL-5-CVR.dwg

TYPE

DESIGN INFORMATION

TYPICAL SECTION

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER — 12-23-16 — 33801

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE

MAJOR COLLECTOR

LEYDEN ROAD ALONG LEYDEN ROCK FRONTAGE

ROW WIDTH	100'
TRAFFIC VOLUMES	YEAR 2030 = 9,100 ADT
POSTED SPEED	40 MPH
MINIMUM CENTERLINE RADIUS	350'
MINIMUM TANGENT BETWEEN CURVES	MATCH EXISTING
MAXIMUM GRADE	MATCH EXISTING

MAX GRADE AT INTERSECTION APPROACHES

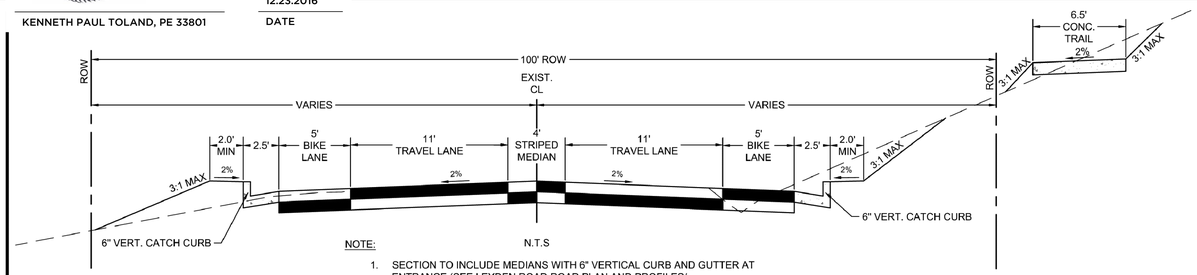
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
MATCH EXIST.	MATCH EXIST.	MATCH EXIST.

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
NA	25' / 0.4' MIN FALL	NA

K VALUES

45 MPH DESIGN	MINIMUM
CREST	80
SAG	70



NOTE:

1. SECTION TO INCLUDE MEDIANS WITH 6" VERTICAL CURB AND GUTTER AT ENTRANCE (SEE LEYDEN ROAD ROAD PLAN AND PROFILES/

MINOR COLLECTOR (WITH PARKING)

ROADS:

W. 85TH DRIVE
YUCCA STREET

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.06 %

MAX GRADE AT INTERSECTION APPROACHES

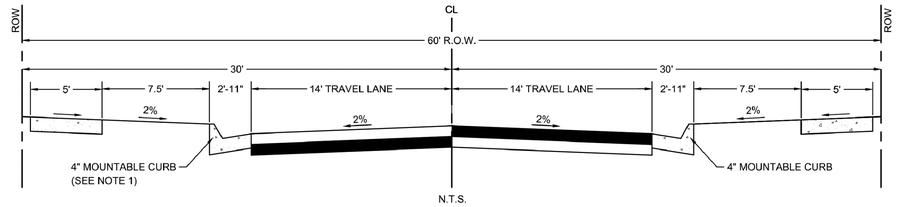
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



NOTE: 1. THE NORTHERN CURB LINES BECOMES 6" VERTICAL CURB AS IT BORDERS BLOCK 20, TRACT S AND BLOCK 16.

MINOR COLLECTOR (NO PARKING)

ROADS:

CULEBRA STREET (FROM W. 84TH AVE TO W. 85TH DRIVE)

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES

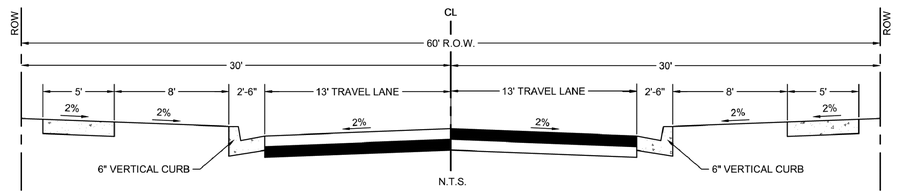
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



MINOR COLLECTOR (NO PARKING)

ROADS:

CULEBRA STREET (FROM LEYDEN RD TO W. 84TH AVE.)

ROW WIDTH	60.0'
TRAFFIC VOLUMES	<3000 ADT
POSTED SPEED	30 - 35 MPH
MINIMUM CENTERLINE RADIUS	300.0'
MINIMUM TANGENT BETWEEN CURVES	100.0'
MAXIMUM GRADE	7.0 %

MAX GRADE AT INTERSECTION APPROACHES

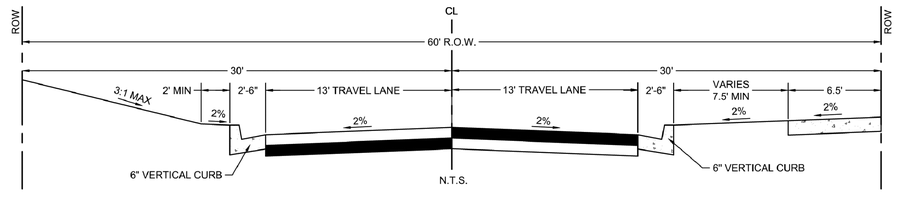
W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
3% FOR 100'	3% FOR 100'	NA

MINIMUM CURB RETURN RADIUS

W/ LOCAL	W/ COLLECTOR	W/ ARTERIAL
25' / 0.4' MIN FALL	25' / 0.4' MIN FALL	NA

K VALUES

40 MPH DESIGN	MINIMUM
CREST	60
SAG	60



NOTE:

1. FROM LEYDEN ROAD TO W. 84TH AVE, CULEBRA STREET SHALL HAVE A 6.5' WALK ON THE EAST SIDE OF THE STREET ONLY. NO WALK TO BE CONSTRUCTED ON THE WEST SIDE OF CULEBRA STREET FROM THE INTERSECTION OF LEYDEN ROAD TO W. 84TH AVE.
2. ADJACENT TO LOT 107, BLOCK 1 THE TREELAWN IS 7.5' WIDE.

APPROVED:
CITY ENGINEER — DATE 12-12-13 — JOB NUMBER 3385

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

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PREPARED FOR:
RRCEA, LLC

REVISIONS:

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1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
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3.	FOR CONSTRUCTION	12/02/2013	EST
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8.			

STAMP: COLORADO REGISTERED PROFESSIONAL ENGINEER — 12-3-15 — 33801

SHEET INFO:

LEYDEN ROCK - FILING 5

TYPICAL STREET SECTIONS 1 OF 2

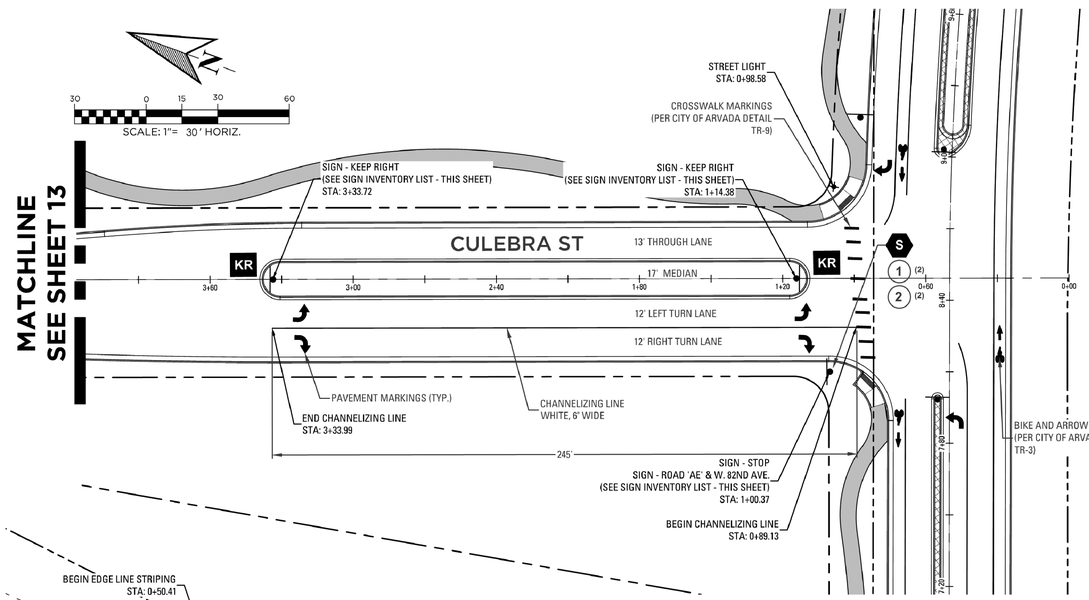
PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = NA'
SUBMITTED ON: 07/22/2013

03 OF 102

J:\2013\LEYDEN ROCK\LEYDEN-F5-FDP\CIVIL\CONSTRUCTION\LEYDEN-F5-TYP-SECT-STREET.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SIGN INVENTORY LIST - LEYDEN ROAD				
ITEM #	QUANTITY OF SIGNS	SIGN DESCRIPTION	CODE #	SIZE
1	2	W. 82ND AVENUE	A-S1-1	-
2	2	CULEBRA STREET	A-S1-1	-
S	1	STOP SIGN	R1-1	30" OCT.
R	2	RIGHT LANE MUST TURN RIGHT	R3-7R	30" x 30"
KR	6	KEEP RIGHT	R4-7	24" x 30"
BL	2	BIKE LANE	R3-17	24" X 18"
END	1	ENDS PLAQUE	R3-17bP	24" X 8"
AH	1	AHEAD PLAQUE	R3-17aP	24" X 8"
200	1	200' PLAQUE	W16-2aP	24" X 12"



R1-1
STOP
30"x30"
BACKGROUND:4090 (3M-White Diamond Grade) or equivalent
FOREGROUND: 1172 (3M-Red EC Film) or equivalent

R3-7R
RIGHT LANE MUST TURN RIGHT
(SYMBOL SIGN)
(Arvada Standard)
30"X30"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R4-7
KEEP RIGHT
(SYMBOL SIGN)
(Arvada Standard)
24"X30"
BACKGROUND: 3930 HIP (3M-White) or equivalent
FOREGROUND: 1178C (3M-Black EC Film) or equivalent

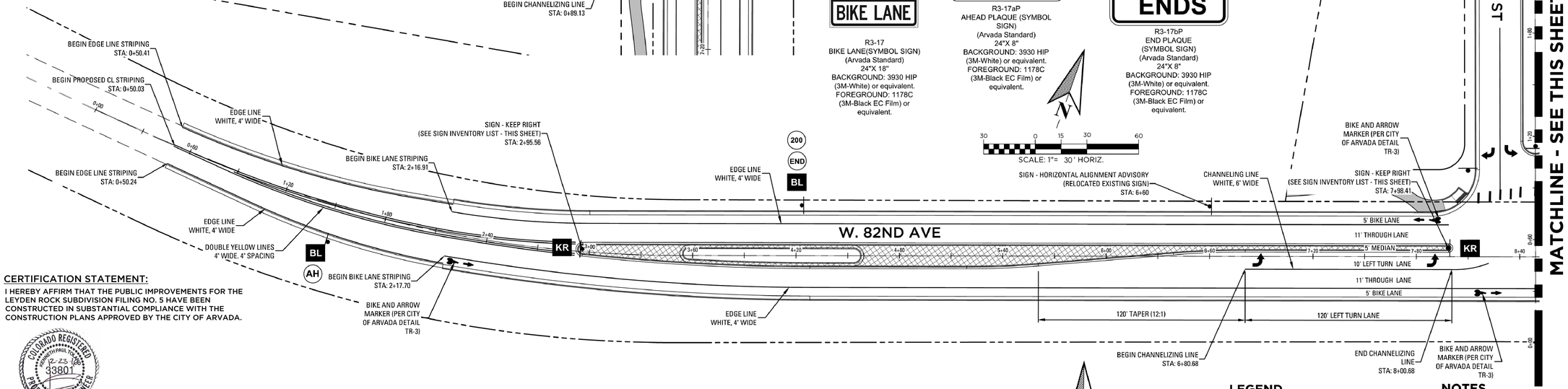
A-S1-1
STREET NAME SIGN
(POST MOUNTED)
36"x9"
(Per Currrent Arvada. Street name signs to be sent to City of Arvada for approval prior to fabricating signs)
BACKGROUND: 4090 (3M-White Diamond Grade) or equivalent
FOREGROUND: 1175C (3M-Blue EC Film) or equivalent
(FOR CITY OF ARVADA LOGO SPECS REFER TO CITY DETAIL TR-14)

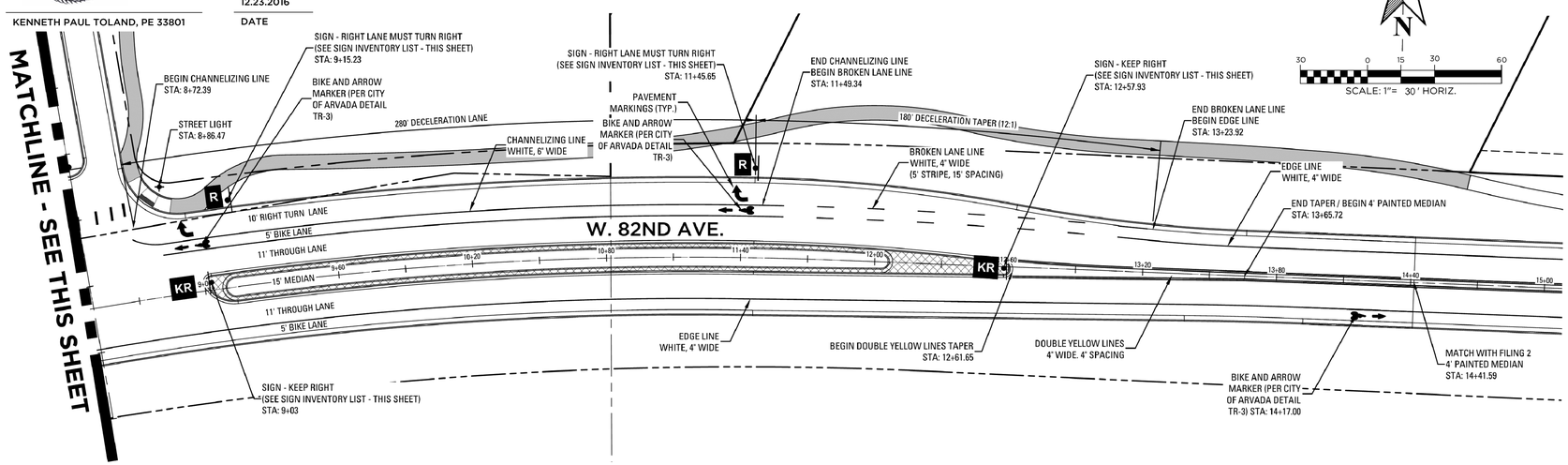
R3-17
BIKE LANE(SYMBOL SIGN)
(Arvada Standard)
24"X 18"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R3-17aP
AHEAD PLAQUE (SYMBOL SIGN)
(Arvada Standard)
24"X 8"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

R3-17bP
END PLAQUE
(SYMBOL SIGN)
(Arvada Standard)
24"X 8"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.

W16-2aP
200' PLAQUE (SYMBOL SIGN)
(Arvada Standard)
24"X12"
BACKGROUND: 3930 HIP (3M-White) or equivalent.
FOREGROUND: 1178C (3M-Black EC Film) or equivalent.



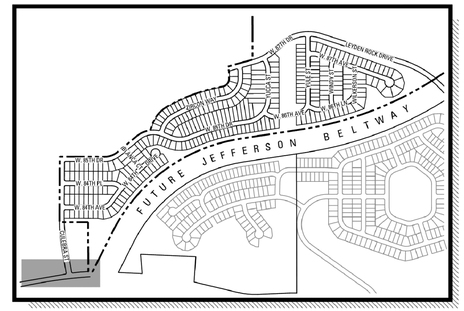


LEGEND

- S = PROPOSED STOP SIGN
- KR = PROPOSED KEEP RIGHT SIGN
- R = PROPOSED RIGHT LANE MUST TURN RIGHT SIGN
- BL = PROPOSED BIKE LANE SIGN
- AH = PROPOSED AHEAD PLAQUE
- END = PROPOSED ENDS PLAQUE
- 200 = PROPOSED "200 FT" PLAQUE
- 14 = SINGLE SIGN
- 14 (2) = TWO IDENTICAL SIGNS MOUNTED BACK TO BACK
- = SIGN POST LOCATION (MULTIPLE SIGN SYMBOLS ADJACENT TO SIGH POST SYMBOL INDICATE MULTIPLE SIGNS MOUNTED TO A SINGLE POST.)

NOTES

1. ALL SIGNAGE TO BE MUTCD COMPLIANT AND AS PER ARVADA SPECIFICATION. ALL SIGN POST TO BE AS PER ARVADA'S SPECIFICATION.
2. ALL SIGNS MOUNTED PER ARVADA STANDARD DETAIL TR-1 "SPECIFICATION FOR SIGN SUPPORT MATERIAL AND INSTALLATION."
3. ALL STREET SIGNS TO BE PER ARVADA STANDARD DETAIL TR-11 "STREET NAME SIGN (POST MOUNTED)".
4. SEE ADDRESS PLAT FOR BLOCK AND ADDRESS INFORMATION.
5. ALL STREET NAME SIGNS SHALL BE SENT TO THE CITY OF ARVADA PRIOR TO FABRICATION.
6. THE POSTED SPEED LIMIT FOR LEYDEN ROAD IS 40MPH.
7. ALL CROSSWALKS/LANE CONTROLLED ARROWS AND BICYCLE SYMBOLS SHALL BE 3M STAMARK A270-ES TAPE (3M) MATERIAL. ALL LANE STRIPING SHALL BE 3M STAMARK 270-ES/271-ES TAPE, INLAID WITH OVERLAY.
8. ALL STREET BIKE LANE STRIPING SHALL BE PER ARVADA STANDARD TR-2 AND TR-5.
9. A BIKE LANE AND ARROW PAVEMENT SYMBOL SHALL BE PLACED EVERY 600 FEET PER ARVADA STANDARD TR-3.



KEYMAP
NTS

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-23-15
33801

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

APPROVED:
CITY ENGINEER — DATE: 12-12-13 — JOB NUMBER: 3385

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/03/2013	EST
4.			
5.			
6.			
7.			
8.			

STAMP:
COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-3-15
33801

SHEET INFO:

LEYDEN ROCK - FILING 5

SIGNAGE & STRIPING & STREET LIGHTS W. 82ND AVE

PROJECT NO: 003-13-05
DRAWN BY: BSS
DESIGNED BY: BSS
SCALE: 1" = 30'
SUBMITTED ON: 07/22/2013

16 OF 102

J:\2008\LEYDEN ROCK\LEYDEN-F5-FDP\CIVIL\CONSTRUCTION\LEYDEN-F5-RD-LEYDEN-SSST.dwg

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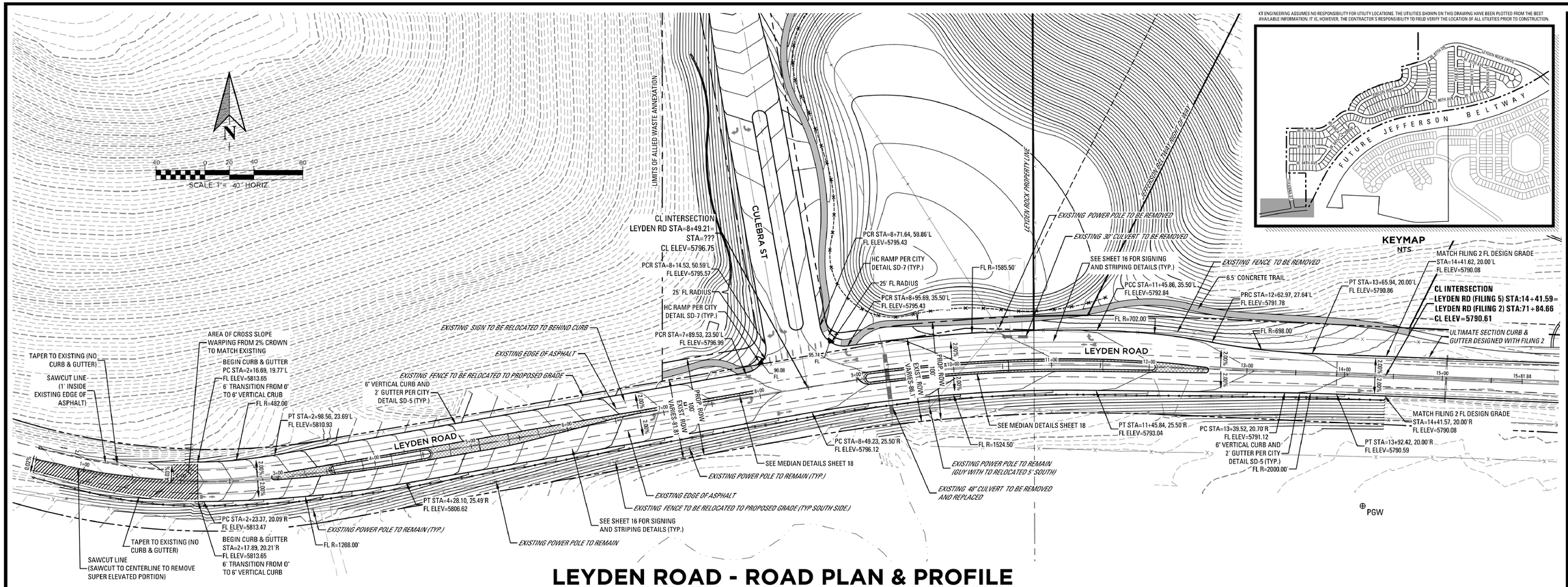
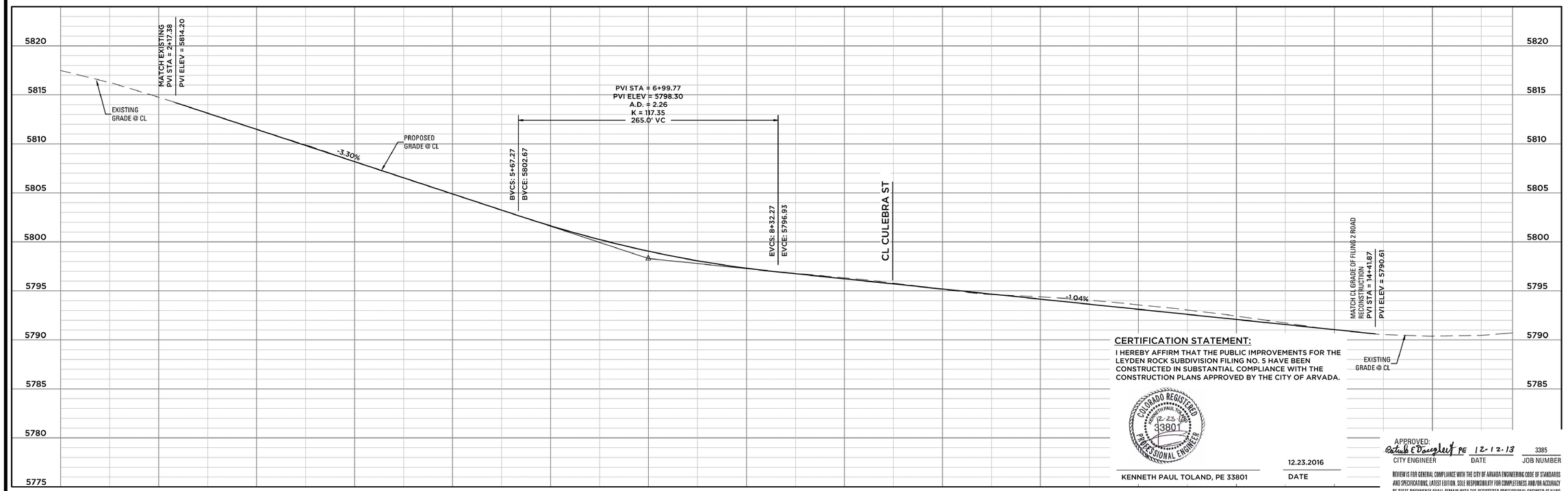


KEYMAP
NTS

LEYDEN ROAD - ROAD PLAN & PROFILE



CERTIFICATION STATEMENT:

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COLORADO REGISTERED KENNETH PAUL TOLAND 12-23-16 33801 PROFESSIONAL ENGINEER

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

APPROVED:
Richard E Dougherty PE 12-12-13 3385
CITY ENGINEER DATE JOB NUMBER

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J:\3038\LEYDEN ROCK\LEYDEN-FS-RDPLOVIL\CONSTRUCTION\LEYDEN-FS-RD-LEYDEN.dwg

KT

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION#	12/02/2013	EST
4			
5			
6			
7			
8			

STAMP:

COLORADO REGISTERED KENNETH PAUL TOLAND 12-3-15 33801 PROFESSIONAL ENGINEER

SHEET INFO:

LEYDEN ROCK - FILING 5

ROAD PLAN & PROFILES
LEYDEN ROAD

PROJECT NO:
003-13-05

DRAWN BY:
BSS

DESIGNED BY:
BSS

SCALE:
1" = 50'

SUBMITTED ON:
07/22/2013

17
OF 102

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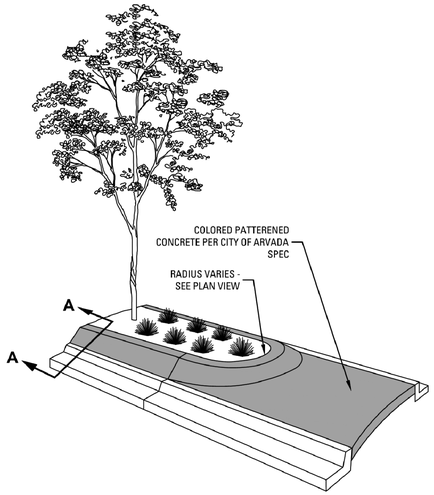
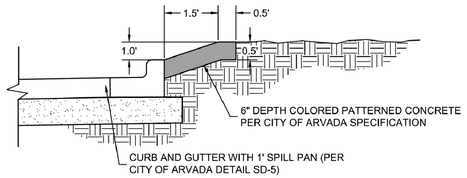
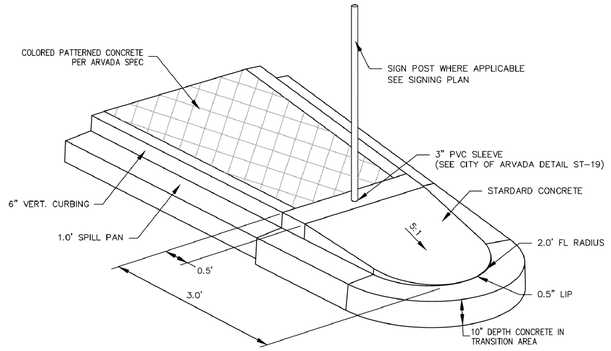


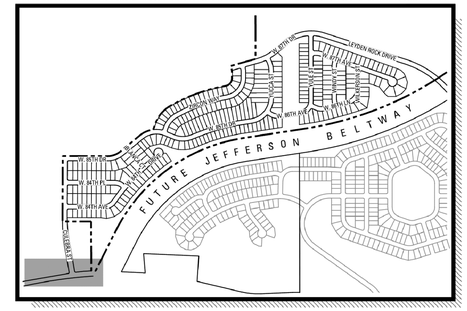
RAISED MEDIAN DETAIL
NTS



SECTION A-A
NTS



PLOWABLE CURB DETAIL
NTS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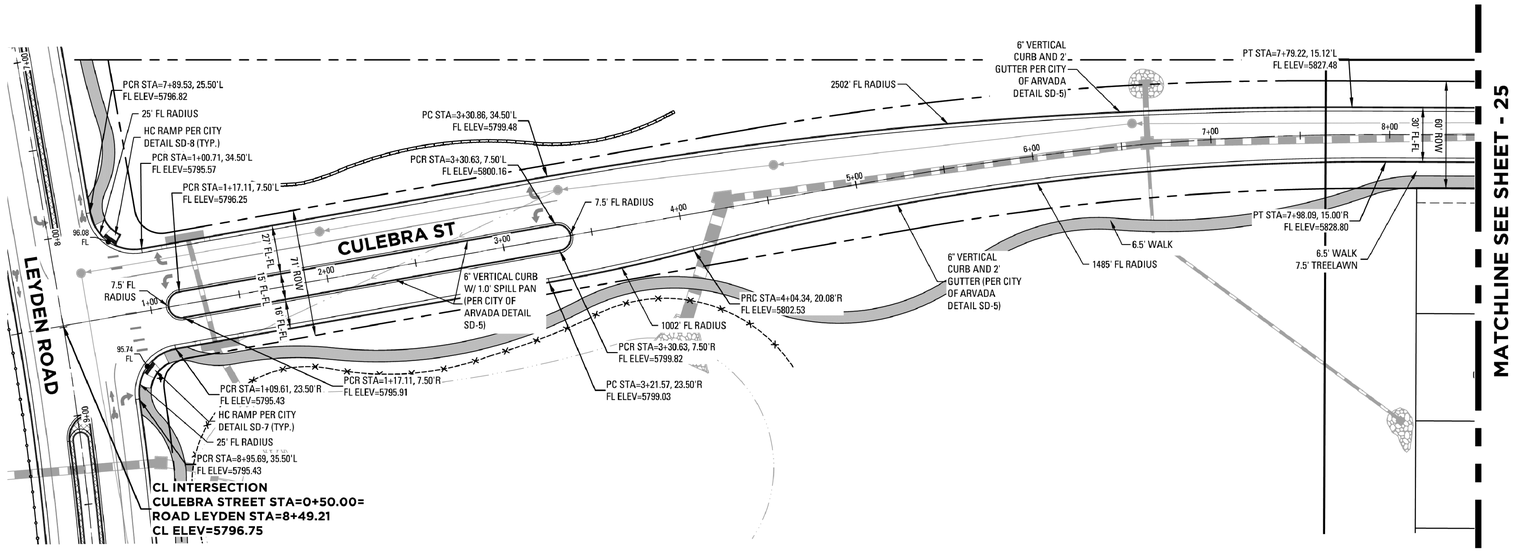
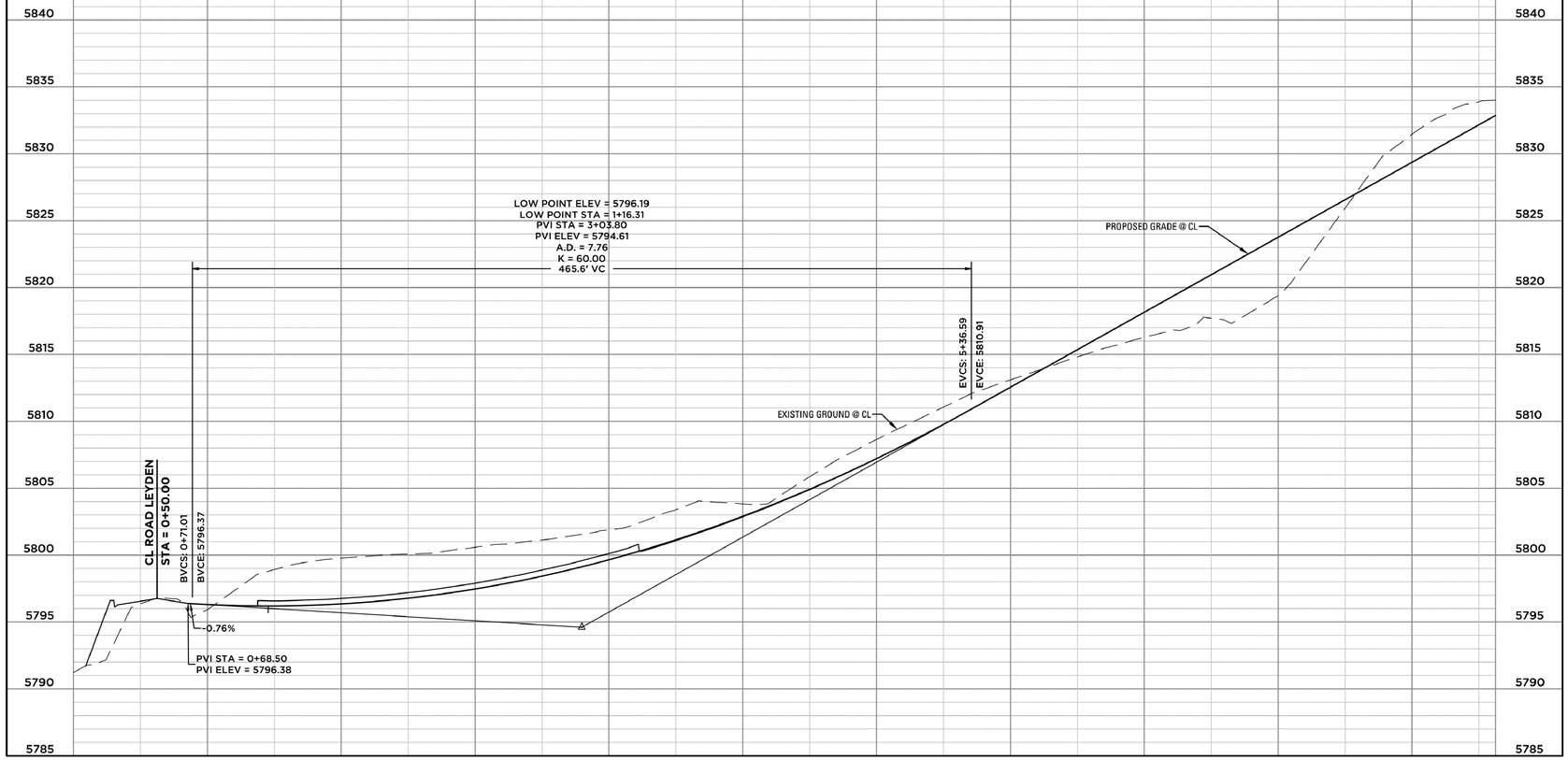
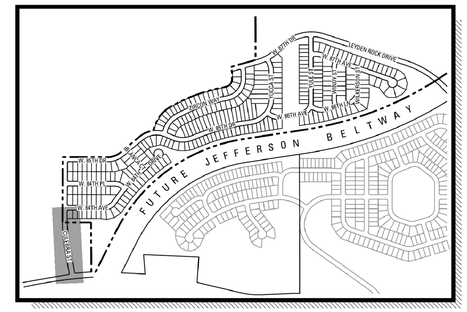


CULEBRA ST - ROAD PLAN & PROFILE



KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.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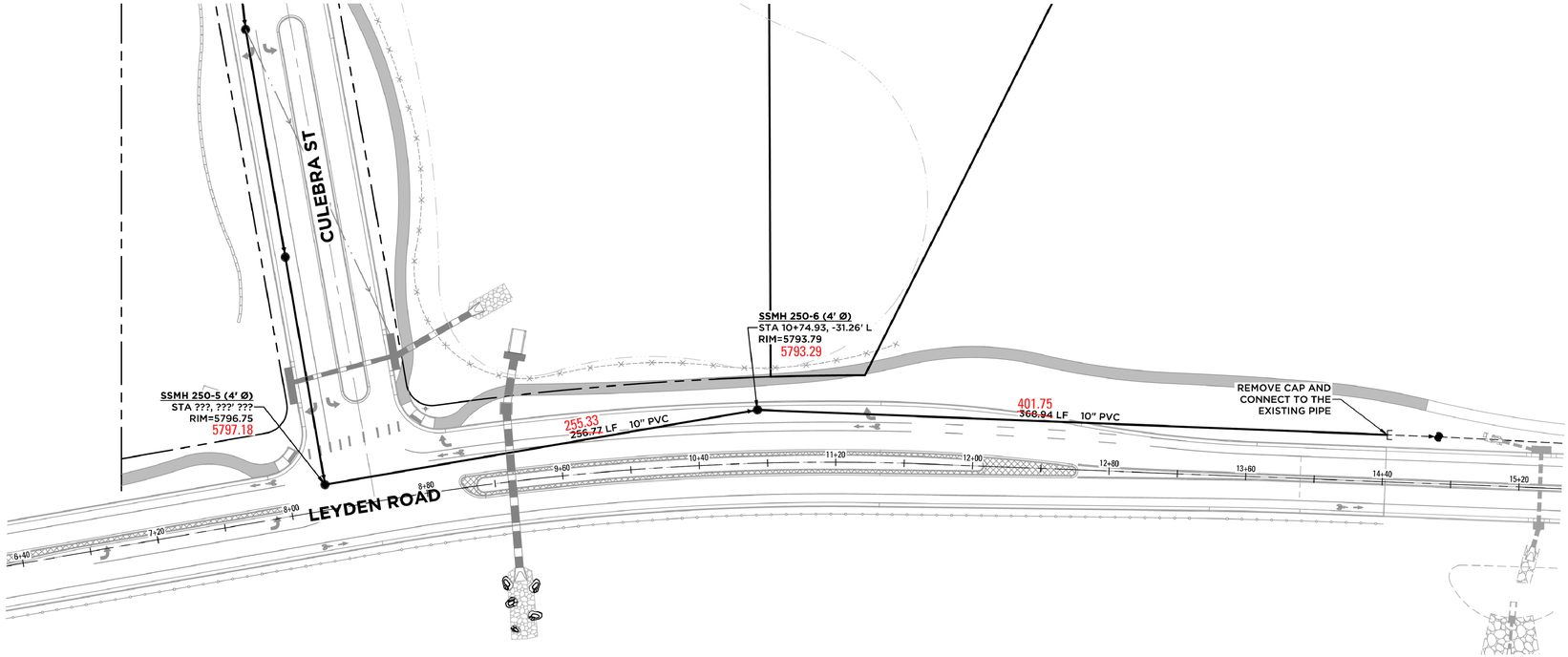
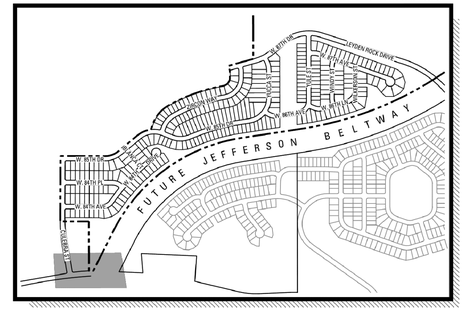
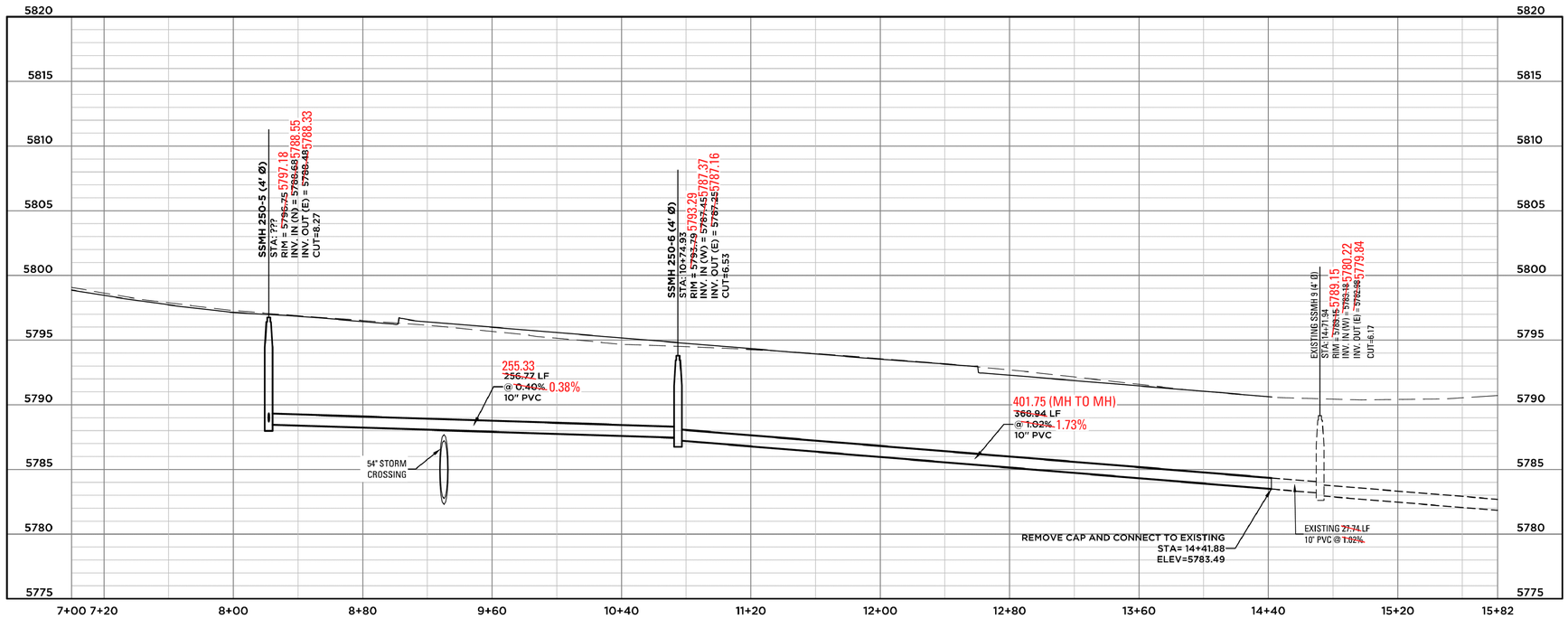




KEYMAP
NTS

LEYDEN ROAD- SANITARY PLAN & PROFILE



CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-23-16
33801

KENNETH PAUL TOLAND, PE 33801 — 12.23.2016 DATE

NOTES

1. ALL SANITARY SEWER SERVICES ARE 4" DIA. UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWER & UNDERDRAIN SERVICES TO EXTEND 12' INTO LOT.
3. ALL SANITARY SEWER & UNDERDRAIN SERVICE STATIONING IS FROM NEAREST DOWNSTREAM MANHOLE.

APPROVED:
Kathleen Daugherty PE 12-12-13 3385
CITY ENGINEER — DATE — JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	11/15/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
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6.			
7.			
8.			

STAMP:
COLORADO REGISTERED PROFESSIONAL ENGINEER
KENNETH PAUL TOLAND
12-3-15
33801

SHEET INFO:

LEYDEN ROCK - FILING 5

SANITARY PLAN & PROFILE
LEYDEN ROAD

PROJECT NO:
003-13-05

DRAWN BY:
EST

DESIGNED BY:
KPT

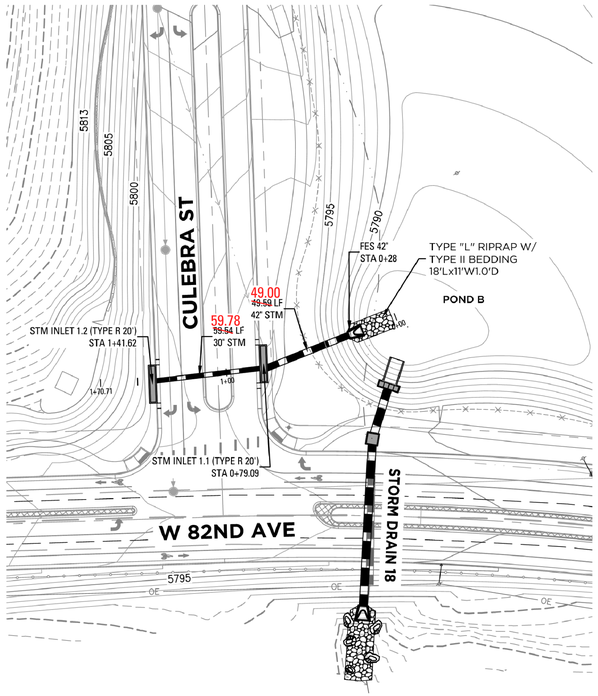
SCALE:
1" = 40'

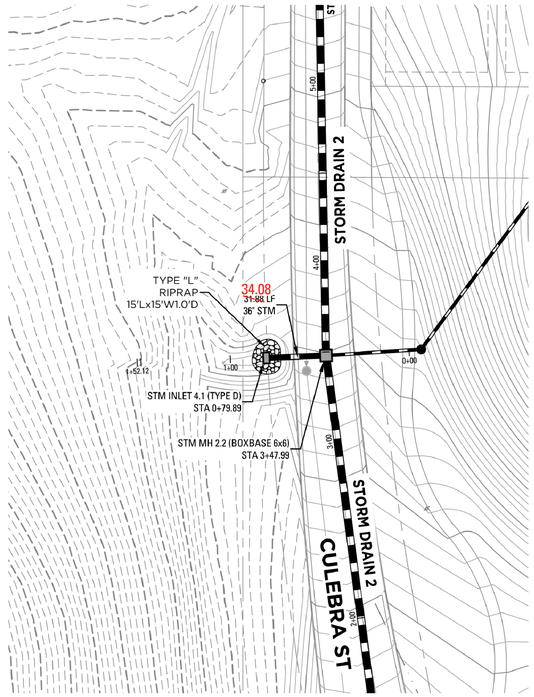
SUBMITTED ON:
07/22/2013

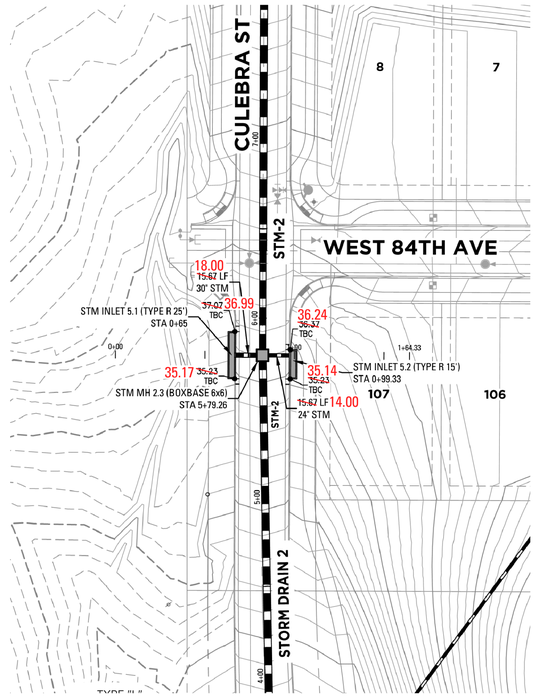
55 OF 102

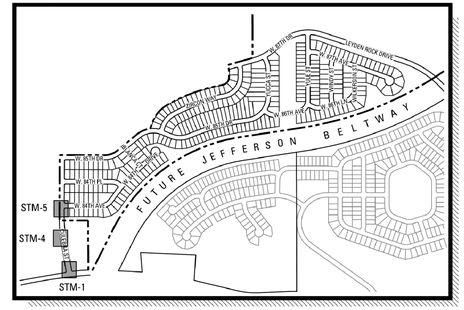
J:\JOBS\LEYDEN ROCK\LEYDEN-FS-FD\CIVIL\CONSTRUCTION\LEYDEN-FS-SAN-LEYDEN.dwg

KT ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



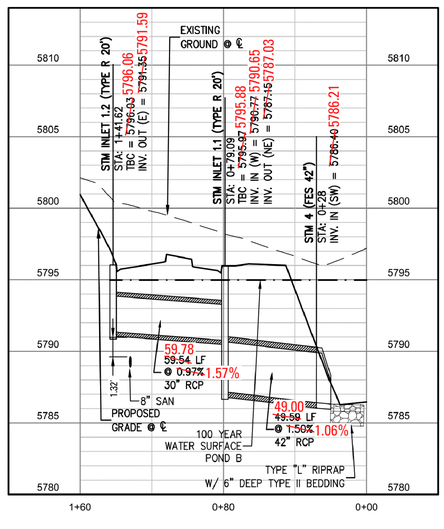




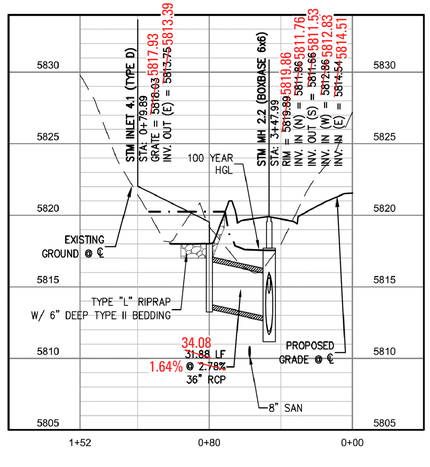


KEYMAP
NTS

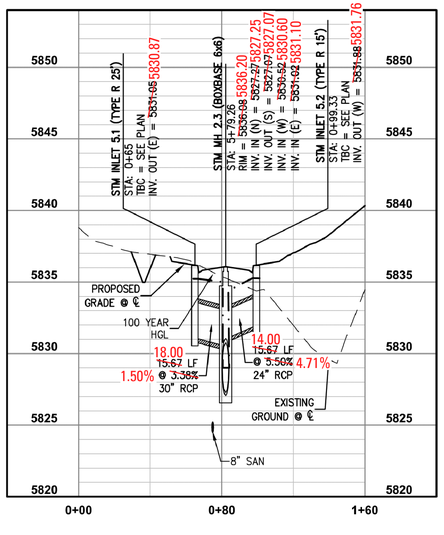
STORM DRAIN LINE 1 PLAN AND PROFILE



STORM DRAIN LINE 4 PLAN AND PROFILE



STORM DRAIN LINE 5 PLAN AND PROFILE



CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-23-16 33801

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

N

50 0 20 40 80
SCALE: 1"= 40' HORIZ.

APPROVED:
CITY ENGINEER — DATE 12-12-13 — 3385 JOB NUMBER

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	FOR CONSTRUCTION	12/02/2013	EST
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6			
7			
8			

STAMP:

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-3-15 33801

SHEET INFO:

LEYDEN ROCK - FILING 5

STORM PLAN & PROFILES
STORM 1, 4, AND 5

PROJECT NO:
003-13-05

DRAWN BY:
EST

DESIGNED BY:
KPT

SCALE:
1" = 40'

SUBMITTED ON:
07/22/2013

J:\2003\LEYDEN ROCK\LEYDEN_FS-FSD\CIVIL\CONSTRUCTION\LEYDEN_FS-STM-1.dwg

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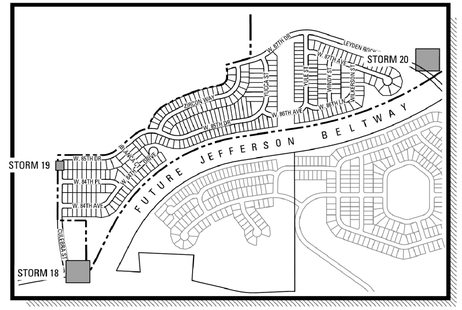
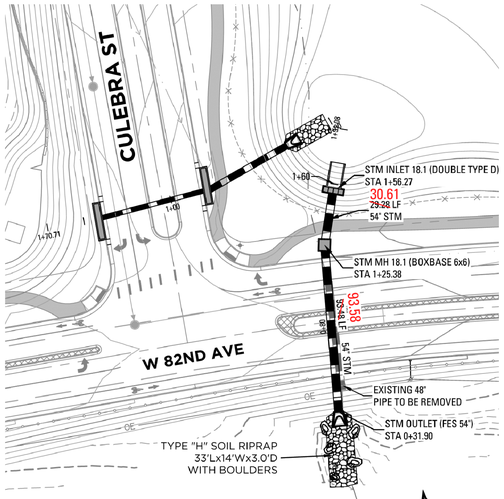
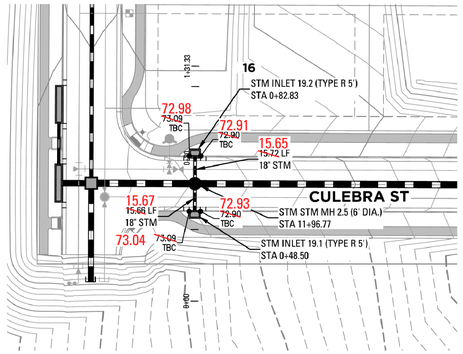


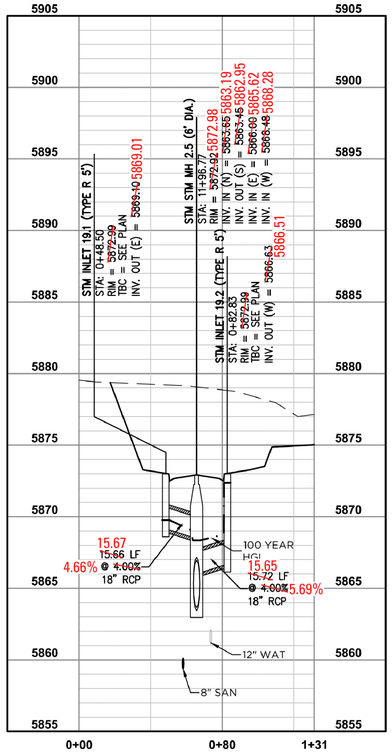
KEYMAP
NTS

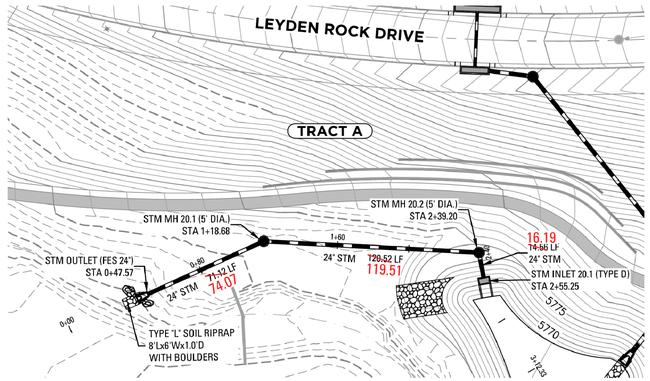


STORM 18
PLAN AND PROFILE



STORM 19
PLAN AND PROFILE





STORM 20
PLAN AND PROFILE

CERTIFICATION STATEMENT:

I HEREBY AFFIRM THAT THE PUBLIC IMPROVEMENTS FOR THE LEYDEN ROCK SUBDIVISION FILING NO. 5 HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE CITY OF ARVADA.

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-23-16 33801

KENNETH PAUL TOLAND, PE 33801

12.23.2016
DATE

SCALE: 1" = 40' HORIZ.

APPROVED:
CITY ENGINEER — DATE — JOB NUMBER
12·12·13 — 3385

REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, LATEST EDITION. SOLE RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS SHALL REMAIN WITH THE REGISTERED PROFESSIONAL ENGINEER SEALING THESE PLANS. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

KT ENGINEERING
12500 W. 58TH AVE. #230
ARVADA, CO 80002
P: 720.638.5190
WWW.KTENG.NET

PREPARED FOR:
RRCEA, LLC

REVISIONS:

NO.	REVISION DESCRIPTION	DATE	BY
1.	CITY OF ARVADA COMMENTS	09/16/2013	EST
2.	CITY OF ARVADA COMMENTS	10/14/2013	EST
3.	CITY OF ARVADA COMMENTS	12/02/2013	EST
4.	FOR CONSTRUCTION#		
5.			
6.			
7.			
8.			

STAMP:

COLORADO REGISTERED PROFESSIONAL ENGINEER 12-3-15 33801

SHEET INFO:

LEYDEN ROCK - FILING 5

STORM PLAN & PROFILES STORM 18, 19 AND 20

PROJECT NO:
003-13-05

DRAWN BY:
KPT

DESIGNED BY:
KPT

SCALE:
1" = 40'

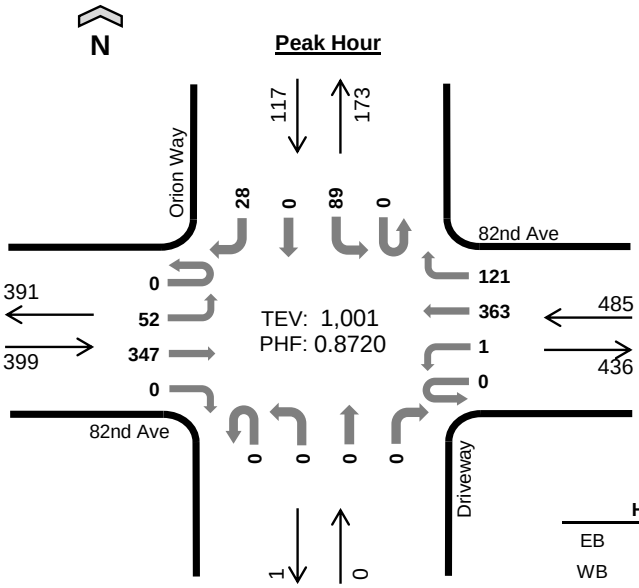
SUBMITTED ON:
07/22/2013

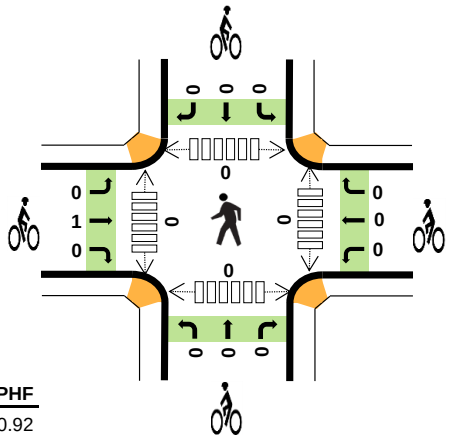
94
OF 102

J:\2003\LEYDEN ROCK\LEYDEN-FS-FDP\CIVIL\CONSTRUCTION\LEYDEN-FS-STM-18-19-20.dwg

Orion Way
82nd Ave

Date: 4/8/2025
Count Period: 7:00 AM to 7:00 PM
Peak Hour: 3:15 PM to 4:15 PM





	HV%	PHF
EB	4%	0.92
WB	2%	0.78
NB	--	--
SB	2%	0.75
TOTAL	2%	0.87

Peak Hour Count Summaries

Peak Hour Interval Start		82nd Ave Eastbound				82nd Ave Westbound				Driveway Northbound				Orion Way Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:15 PM		0	20	85	0	0	1	72	24	0	0	0	0	0	16	0	6	224	0
3:30 PM		0	5	84	0	0	0	105	26	0	0	0	0	0	27	0	7	254	0
3:45 PM		0	18	91	0	0	0	112	44	0	0	0	0	0	12	0	10	287	0
4:00 PM		0	9	87	0	0	0	74	27	0	0	0	0	0	34	0	5	236	1,001
Pk Hr	All	0	52	347	0	0	1	363	121	0	0	0	0	0	89	0	28	1,001	
	HV	0	1	13	0	0	0	8	1	0	0	0	0	0	0	0	2	25	
	HV%	-	2%	4%	-	-	0%	2%	1%	-	-	-	-	-	0%	-	7%	2%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:15 PM	6	0	0	1	*7*	0	0	0	0	*0*	0	0	0	0	*0*
3:30 PM	4	2	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	0	4	0	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:00 PM	4	3	0	0	*7*	1	0	0	0	*1*	0	0	0	0	*0*
Peak Hour	14	9	0	2	*25*	1	0	0	0	*1*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	82nd Ave				82nd Ave				Driveway				Orion Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	82	0	0	0	26	4	0	0	0	0	0	15	0	13	142	0
7:15 AM	0	2	168	0	0	0	15	7	0	0	0	0	0	51	0	14	257	0
7:30 AM	0	0	139	0	0	0	44	8	0	0	0	0	0	42	0	14	247	0
7:45 AM	0	2	80	0	0	0	78	17	0	0	0	0	0	23	0	24	224	870
8:00 AM	0	5	86	0	0	0	47	15	0	0	0	0	0	31	0	13	197	925
8:15 AM	0	4	83	0	0	0	63	14	0	0	0	0	0	25	0	8	197	865
8:30 AM	0	3	69	0	0	0	43	21	0	0	0	0	0	24	0	7	167	785
8:45 AM	0	3	76	0	0	0	51	12	0	0	0	0	0	17	0	6	165	726
9:00 AM	0	2	54	0	0	0	35	13	0	0	0	0	0	15	0	4	123	652
9:15 AM	0	0	47	0	0	0	36	9	0	0	0	0	0	16	0	5	113	568
9:30 AM	0	2	92	0	0	0	26	10	0	0	0	0	0	30	0	4	164	565
9:45 AM	0	3	67	0	0	0	58	8	0	0	0	0	0	20	0	7	163	563
10:00 AM	0	2	41	0	0	0	38	10	0	0	0	0	0	16	0	1	108	548
10:15 AM	0	1	37	0	0	0	29	9	0	0	0	0	0	23	0	3	102	537
10:30 AM	0	2	36	0	0	0	38	9	0	0	0	0	0	22	0	3	110	483
10:45 AM	0	1	46	0	0	1	40	8	0	0	0	0	0	10	0	6	112	432
11:00 AM	0	6	42	0	0	0	47	19	0	0	0	0	0	17	0	3	134	458
11:15 AM	0	7	69	0	0	0	43	12	0	0	0	0	0	16	0	5	152	508
11:30 AM	0	5	60	0	0	0	62	15	0	0	0	0	0	14	0	6	162	560
11:45 AM	0	1	53	0	0	1	45	26	0	0	0	0	0	14	0	8	148	596
12:00 PM	0	3	58	0	0	0	50	15	0	0	0	0	0	12	0	4	142	604
12:15 PM	0	7	39	0	0	0	51	18	0	0	0	0	0	12	0	4	131	583
12:30 PM	0	2	44	0	0	0	46	11	0	0	0	0	0	14	0	5	122	543
12:45 PM	0	4	46	0	0	0	43	19	0	0	0	0	0	15	0	2	129	524
1:00 PM	0	6	45	0	0	0	37	13	0	0	0	0	0	21	0	5	127	509
1:15 PM	0	7	52	0	0	0	83	29	0	0	0	0	0	18	0	2	191	569
1:30 PM	0	8	47	0	0	0	57	22	0	0	0	0	0	18	0	3	155	602
1:45 PM	0	4	60	0	0	0	43	16	0	0	0	0	0	13	0	6	142	615
2:00 PM	0	4	61	0	0	0	63	22	0	0	0	0	0	20	0	5	175	663
2:15 PM	0	6	66	0	0	1	40	13	0	0	0	0	0	18	0	3	147	619
2:30 PM	0	4	69	0	0	0	55	15	0	0	0	0	1	26	0	4	174	638
2:45 PM	0	7	59	0	0	0	72	22	0	0	0	0	0	16	0	8	184	680
3:00 PM	0	6	69	0	0	1	70	24	0	0	0	0	0	17	0	9	196	701
3:15 PM	**0**	**20**	**85**	**0**	**0**	**1**	**72**	**24**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**6**	**224**	**778**
3:30 PM	**0**	**5**	**84**	**0**	**0**	**0**	**105**	**26**	**0**	**0**	**0**	**0**	**0**	**27**	**0**	**7**	**254**	**858**
3:45 PM	**0**	**18**	**91**	**0**	**0**	**0**	**112**	**44**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**10**	**287**	**961**
4:00 PM	**0**	**9**	**87**	**0**	**0**	**0**	**74**	**27**	**0**	**0**	**0**	**0**	**0**	**34**	**0**	**5**	**236**	**1,001**
4:15 PM	0	11	80	0	0	0	75	27	0	0	0	0	0	21	0	4	218	995
4:30 PM	0	11	85	0	0	0	79	28	0	0	0	0	0	16	0	6	225	966
4:45 PM	0	13	89	0	0	0	82	37	0	0	0	0	0	25	0	3	249	928
5:00 PM	0	9	67	0	0	0	100	23	0	0	0	0	0	30	0	2	231	923
5:15 PM	0	12	91	0	0	0	78	27	0	0	0	0	0	25	0	3	236	941
5:30 PM	0	15	87	0	0	0	94	29	0	0	0	0	0	20	0	5	250	966
5:45 PM	0	14	70	0	0	0	94	34	0	0	0	0	1	20	0	3	236	953
6:00 PM	0	8	54	0	0	0	76	30	0	0	0	0	0	20	0	3	191	913
6:15 PM	0	3	39	0	0	0	83	25	0	0	0	0	0	12	0	5	167	844
6:30 PM	0	3	45	0	0	0	76	34	0	0	0	0	0	13	0	4	175	769
6:45 PM	0	7	55	0	0	0	67	27	0	0	0	0	0	14	0	6	176	709
Count Total	0	279	3,251	0	0	5	2,841	927	0	0	0	0	2	966	0	286	8,557	
Pk Hr All	**0**	**52**	**347**	**0**	**0**	**1**	**363**	**121**	**0**	**0**	**0**	**0**	**0**	**89**	**0**	**28**	**1,001**	
Pk Hr HV	**0**	**1**	**13**	**0**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**25**	
Pk Hr HV%	**-**	**2%**	**4%**	**-**	**-**	**0%**	**2%**	**1%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**7%**	**2%**	

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Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	3	5	0	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	1	0	0	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	1	2	0	0	*3*	0	0	0	0	*0*	1	0	0	0	*1*
7:45 AM	4	4	0	1	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	1	1	0	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
9:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
9:15 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	1	0	0	*1*
9:30 AM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
9:45 AM	1	2	0	0	*3*	0	0	0	0	*0*	1	1	0	0	*2*
10:00 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
10:15 AM	2	0	0	0	*2*	0	0	0	0	*0*	1	0	0	0	*1*
10:30 AM	1	3	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
10:45 AM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
11:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
11:15 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	1	1	0	0	*2*	0	1	0	0	*1*	0	0	0	0	*0*
12:00 PM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	1	0	0	1	*2*
1:15 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
1:30 PM	1	2	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
1:45 PM	1	1	0	0	*2*	0	0	0	2	*2*	0	0	0	0	*0*
2:00 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	0	1	0	0	*1*	0	1	0	0	*1*	0	0	0	0	*0*
2:30 PM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
2:45 PM	1	3	0	0	*4*	1	0	0	0	*1*	0	0	0	0	*0*
3:00 PM	2	0	0	1	*3*	1	0	0	0	*1*	0	0	0	1	*1*
3:15 PM	**6**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3:30 PM	**4**	**2**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3:45 PM	**0**	**4**	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:00 PM	**4**	**3**	**0**	**0**	**7**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
4:15 PM	2	0	0	0	*2*	1	2	0	0	*3*	0	0	0	0	*0*
4:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	1	0	0	*1*	0	2	0	0	*2*	0	0	0	0	*0*
5:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	1	0	0	*1*	0	0	0	0	*0*	1	0	0	0	*1*
5:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
6:00 PM	1	0	0	0	*1*	0	1	0	0	*1*	0	0	0	0	*0*
6:15 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:30 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	60	54	0	7	*121*	4	7	0	2	*13*	5	2	0	3	*10*
Peak Hour	**14**	**9**	**0**	**2**	***25***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	82nd Ave				82nd Ave				Driveway				Orion Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	4	1	0	0	0	0	0	0	0	0	8	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0
7:30 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3	0
7:45 AM	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	1	9	22
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	3	17
8:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	17
8:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	16
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	8
9:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
9:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	6
9:30 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	5	9
9:45 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	11
10:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	12
10:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12
10:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	11
10:45 AM	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	3	11
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
11:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	10
11:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8
11:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	7
12:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8
12:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	7
12:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
1:15 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	5
1:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	7
1:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
2:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	10
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	8
2:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	7
2:45 PM	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	4	9
3:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	3	10
3:15 PM	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**16**
3:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**20**
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**21**
4:00 PM	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**25**
4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	20
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	11
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
5:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
6:30 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	5
6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
Count Total	0	3	57	0	0	0	47	7	0	0	0	0	0	4	0	3	121	
Pk Hr Heavy	**0**	**1**	**13**	**0**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**25**	

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Count Summaries - Bikes

Interval Start	82nd Ave				82nd Ave				Driveway				Orion Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
3:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
4:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
4:15 PM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	1	3	0	0	0	6	1	0	0	0	0	0	0	0	2	13	
Pk Hr Bike	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	

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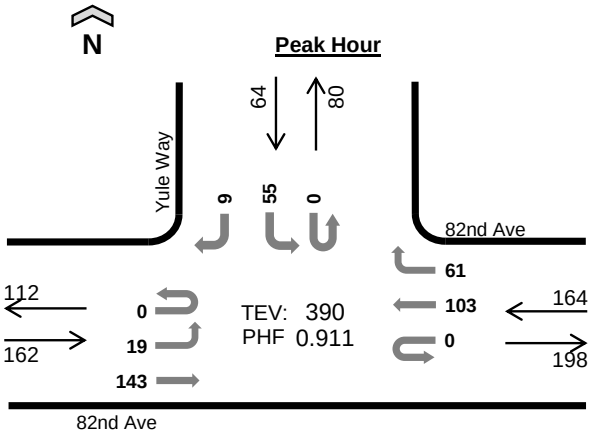
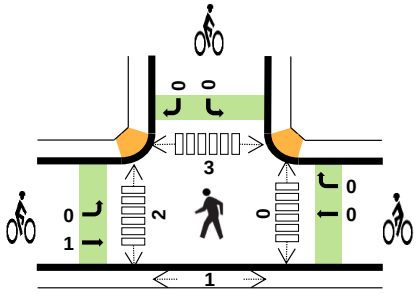
Yule Way
82nd Ave

Date: 4/8/2025
Count Period: 7:00 AM to 7:00 PM
Peak Hour: 3:45 PM to 4:45 PM





	HV%	PHF
EB	2%	0.83
WB	3%	0.73
NB	--	--
SB	3%	0.84
TOTAL	3%	0.91

Peak Hour Count Summaries

Peak Hour Interval Start		82nd Ave Eastbound				82nd Ave Westbound				n/a Northbound				Yule Way Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:45 PM		**0**	**5**	**32**	**0**	**0**	**0**	**36**	**20**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**1**	**107**	**0**
4:00 PM		**0**	**4**	**30**	**0**	**0**	**0**	**31**	**14**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**3**	**98**	**0**
4:15 PM		**0**	**5**	**37**	**0**	**0**	**0**	**16**	**15**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**3**	**85**	**0**
4:30 PM		**0**	**5**	**44**	**0**	**0**	**0**	**20**	**12**	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**2**	**100**	**390**
Pk Hr	All	**0**	**19**	**143**	**0**	**0**	**0**	**103**	**61**	**0**	**0**	**0**	**0**	**0**	**55**	**0**	**9**	**390**	
	HV	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**10**	
	HV%	**-**	**0%**	**2%**	**-**	**-**	**-**	**5%**	**0%**	**-**	**-**	**-**	**-**	**-**	**2%**	**-**	**11%**	**3%**	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:45 PM	**0**	**4**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***
4:00 PM	**1**	**1**	**0**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	***2***
4:15 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
4:30 PM	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**2**	**0**	***2***
Peak Hour	**3**	**5**	**0**	**2**	***10***	**1**	**0**	**0**	**0**	***1***	**0**	**2**	**3**	**1**	***6***

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Count Summaries - All Vehicles

Interval Start	82nd Ave				82nd Ave				n/a				Yule Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	25	0	0	0	19	2	0	0	0	0	0	15	0	6	67	0
7:15 AM	0	0	48	0	0	0	16	1	0	0	0	0	0	31	0	11	107	0
7:30 AM	0	2	34	0	0	0	21	4	0	0	0	0	0	24	0	4	89	0
7:45 AM	0	4	29	0	0	0	37	10	0	0	0	0	0	18	0	12	110	373
8:00 AM	0	0	26	0	0	0	29	3	0	0	0	0	0	11	0	2	71	377
8:15 AM	0	0	24	0	0	0	19	17	0	0	0	0	0	19	0	0	79	349
8:30 AM	0	0	15	0	1	0	23	5	0	0	0	0	0	6	0	3	53	313
8:45 AM	0	2	23	0	0	0	16	6	0	0	0	0	0	15	0	4	66	269
9:00 AM	0	0	14	0	0	0	17	12	0	0	0	0	0	4	0	4	51	249
9:15 AM	0	0	14	0	0	0	14	9	0	0	0	0	0	12	0	7	56	226
9:30 AM	0	1	27	0	0	0	14	3	0	0	0	0	0	15	0	3	63	236
9:45 AM	0	1	13	0	0	0	16	4	0	0	0	0	0	10	0	3	47	217
10:00 AM	0	0	17	0	0	0	17	7	0	0	0	0	0	7	0	0	48	214
10:15 AM	0	0	12	0	0	0	13	7	0	0	0	0	0	5	0	1	38	196
10:30 AM	0	0	15	0	0	0	13	5	0	0	0	0	0	5	0	3	41	174
10:45 AM	0	1	14	0	0	0	12	3	0	0	0	0	0	5	0	1	36	163
11:00 AM	0	0	11	0	0	0	14	6	0	0	0	0	0	4	0	3	38	153
11:15 AM	0	0	23	0	0	0	14	6	0	0	0	0	0	9	0	4	56	171
11:30 AM	0	0	15	0	0	0	14	6	0	0	0	0	0	8	0	5	48	178
11:45 AM	0	1	16	0	0	0	20	6	0	0	0	0	0	4	0	3	50	192
12:00 PM	0	0	15	0	0	0	16	6	0	0	0	0	0	4	0	0	41	195
12:15 PM	0	0	11	0	0	0	12	6	0	0	0	0	0	3	0	2	34	173
12:30 PM	0	1	18	0	1	0	20	5	0	0	0	0	0	5	0	0	50	175
12:45 PM	0	1	14	0	0	0	12	12	0	0	0	0	0	3	0	1	43	168
1:00 PM	0	3	13	0	0	0	11	6	0	0	0	0	0	8	0	2	43	170
1:15 PM	0	3	16	0	1	0	24	10	0	0	0	0	0	6	0	0	60	196
1:30 PM	0	2	13	0	0	0	7	7	0	0	0	0	0	5	0	2	36	182
1:45 PM	0	0	11	0	0	0	13	10	0	0	0	0	0	7	0	4	45	184
2:00 PM	0	6	25	0	0	0	16	10	0	0	0	0	0	8	0	3	68	209
2:15 PM	0	3	26	0	0	0	11	6	0	0	0	0	0	4	0	1	51	200
2:30 PM	0	1	17	0	0	0	20	7	0	0	0	0	0	9	0	5	59	223
2:45 PM	0	4	20	0	0	0	23	11	0	0	0	0	0	12	0	4	74	252
3:00 PM	0	3	30	0	0	0	17	12	0	0	0	0	0	13	0	3	78	262
3:15 PM	0	3	36	0	0	0	18	10	0	0	0	0	0	14	0	0	81	292
3:30 PM	0	6	30	0	0	0	24	18	0	0	0	0	0	15	0	2	95	328
3:45 PM	**0**	**5**	**32**	**0**	**0**	**0**	**36**	**20**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**1**	**107**	**361**
4:00 PM	**0**	**4**	**30**	**0**	**0**	**0**	**31**	**14**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**3**	**98**	**381**
4:15 PM	**0**	**5**	**37**	**0**	**0**	**0**	**16**	**15**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**3**	**85**	**385**
4:30 PM	**0**	**5**	**44**	**0**	**0**	**0**	**20**	**12**	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**2**	**100**	**390**
4:45 PM	0	8	39	0	1	0	24	10	0	0	0	0	0	9	0	1	92	375
5:00 PM	0	14	36	0	0	0	24	13	0	0	0	0	0	8	0	3	98	375
5:15 PM	0	4	38	0	0	0	23	15	0	0	0	0	0	16	0	1	97	387
5:30 PM	0	4	22	0	0	0	40	17	0	0	0	0	0	12	0	0	95	382
5:45 PM	0	3	34	0	0	0	21	22	0	0	0	0	0	15	0	1	96	386
6:00 PM	0	6	28	0	0	0	31	6	0	0	0	0	0	8	0	2	81	369
6:15 PM	0	8	19	0	1	0	25	13	0	0	0	0	0	6	0	2	74	346
6:30 PM	0	5	21	0	0	0	16	9	0	0	0	0	0	4	0	0	55	306
6:45 PM	0	7	20	0	0	0	25	8	0	0	0	0	0	6	0	0	66	276
Count Total	0	126	1,110	0	5	0	934	432	0	0	0	0	0	482	0	127	3,216	
Pk Hr All	**0**	**19**	**143**	**0**	**0**	**0**	**103**	**61**	**0**	**0**	**0**	**0**	**0**	**55**	**0**	**9**	**390**	
Pk Hr HV	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**10**	
Pk Hr HV%	**-**	**0%**	**2%**	**-**	**-**	**-**	**5%**	**0%**	**-**	**-**	**-**	**-**	**-**	**2%**	**-**	**11%**	**3%**	

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Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	1	0	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	1	0	0	0	*1*
7:30 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	1	0	*1*
7:45 AM	3	1	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
8:15 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	2	0	*2*
8:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
9:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
9:15 AM	0	2	0	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
9:30 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
9:45 AM	0	1	0	1	*2*	0	1	0	0	*1*	0	0	0	0	*0*
10:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
10:15 AM	0	1	0	0	*1*	0	0	0	0	*0*	2	0	0	0	*2*
10:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
10:45 AM	1	1	0	0	*2*	0	0	0	0	*0*	2	0	0	0	*2*
11:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
11:15 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	0	0	*1*
11:45 AM	1	1	0	0	*2*	0	0	0	0	*0*	1	1	1	0	*3*
12:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	1	0	*2*
12:15 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	0	1	0	0	*1*	1	1	0	1	*3*	0	0	0	0	*0*
12:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	1	0	0	0	*1*	0	1	0	0	*1*	0	0	0	0	*0*
1:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
1:45 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	1	1	0	*2*
2:00 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	2	0	*2*
2:30 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	1	0	*1*
2:45 PM	0	1	0	1	*2*	0	1	0	0	*1*	0	0	1	0	*1*
3:00 PM	1	0	0	0	*1*	0	1	0	0	*1*	0	0	0	0	*0*
3:15 PM	4	0	0	0	*4*	1	0	0	1	*2*	0	0	0	0	*0*
3:30 PM	1	3	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	**0**	**4**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**
4:00 PM	**1**	**1**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**2**
4:15 PM	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**2**
4:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	1	0	2	0	*3*
5:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	1	0	0	0	*1*
5:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
6:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
6:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	20	28	0	9	*57*	3	5	0	2	*10*	8	8	18	1	*35*
Peak Hour	**3**	**5**	**0**	**2**	***10***	**1**	**0**	**0**	**0**	***1***	**0**	**2**	**3**	**1**	**6**

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Count Summaries - Heavy Vehicles

Interval Start	82nd Ave				82nd Ave				n/a				Yule Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	4	7
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	7
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
9:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
9:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	6
9:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
9:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	7
10:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
10:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	5
10:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	5
10:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	5
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
11:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4
12:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4
12:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
2:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	4
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	5
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
3:15 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9
3:30 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	11
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**13**
4:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**4**	**16**
4:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13**
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**10**
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	20	0	0	0	23	5	0	0	0	0	0	5	0	4	57	
Pk Hr Heavy	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**10**	

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Count Summaries - Bikes

Interval Start	82nd Ave				82nd Ave				n/a				Yule Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	3	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
3:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	3	0	0	0	4	1	0	0	0	0	0	2	0	0	10	
Pk Hr Bike	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	

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Vehicle Classification Report Summary

Location: 82nd Ave E/O Orion Way

Count Direction: Eastbound / Westbound

Date Range: 4/1/2025 to 4/3/2025

Site Code: 04

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Eastbound	15	11,381	2,341	97	362	31	0	1	3	0	0	0	0	14,231
	0.1%	80.0%	16.5%	0.7%	2.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Westbound	17	10,110	2,763	96	391	22	0	0	3	0	0	0	0	13,402
	0.1%	75.4%	20.6%	0.7%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	32	21,491	5,104	193	753	53	0	1	6	0	0	0	0	27,633
	0.1%	77.8%	18.5%	0.7%	2.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Tuesday, April 1, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	22	6	0	4	0	0	0	0	0	0	0	0	**32**
5:00 AM	0	57	21	0	5	0	0	0	0	0	0	0	0	**83**
6:00 AM	0	119	40	2	5	0	0	0	0	0	0	0	0	**166**
7:00 AM	1	431	95	5	15	0	0	0	0	0	0	0	0	**547**
8:00 AM	0	408	56	5	10	1	0	0	0	0	0	0	0	**480**
9:00 AM	0	303	56	2	5	3	0	0	0	0	0	0	0	**369**
10:00 AM	0	192	51	1	2	0	0	0	0	0	0	0	0	**246**
11:00 AM	0	235	50	2	9	1	0	0	0	0	0	0	0	**297**
12:00 PM	1	217	49	3	12	1	0	1	0	0	0	0	0	**284**
1:00 PM	0	206	41	0	4	0	0	0	0	0	0	0	0	**251**
2:00 PM	1	231	56	1	8	0	0	0	0	0	0	0	0	**297**
3:00 PM	1	289	59	8	3	0	0	0	0	0	0	0	0	**360**
4:00 PM	0	319	82	4	7	0	0	0	0	0	0	0	0	**412**
5:00 PM	0	346	65	1	5	1	0	0	0	0	0	0	0	**418**
6:00 PM	0	187	27	0	3	0	0	0	0	0	0	0	0	**217**
7:00 PM	0	132	17	0	1	0	0	0	0	0	0	0	0	**150**
8:00 PM	0	71	11	0	1	0	0	0	0	0	0	0	0	**83**
9:00 PM	0	40	6	0	0	0	0	0	0	0	0	0	0	**46**
10:00 PM	0	21	4	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**4**	**3,844**	**798**	**34**	**99**	**7**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4,787**
	0.1%	**80.3%**	**16.7%**	**0.7%**	**2.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Tuesday, April 1, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	0	9	11	0	1	0	0	0	0	0	0	0	0	**21**
6:00 AM	0	34	13	9	3	0	0	0	0	0	0	0	0	**59**
7:00 AM	0	137	35	5	4	0	0	0	0	0	0	0	0	**181**
8:00 AM	0	199	45	1	12	0	0	0	0	0	0	0	0	**257**
9:00 AM	0	152	58	1	4	0	0	0	0	0	0	0	0	**215**
10:00 AM	0	154	37	2	12	0	0	0	1	0	0	0	0	**206**
11:00 AM	0	219	49	3	9	1	0	0	0	0	0	0	0	**281**
12:00 PM	0	186	65	0	8	1	0	0	0	0	0	0	0	**260**
1:00 PM	0	232	55	1	9	1	0	0	0	0	0	0	0	**298**
2:00 PM	0	221	54	6	7	0	0	0	0	0	0	0	0	**288**
3:00 PM	2	342	79	3	8	1	0	0	0	0	0	0	0	**435**
4:00 PM	0	327	75	2	9	0	0	0	0	0	0	0	0	**413**
5:00 PM	4	369	91	0	8	0	0	0	0	0	0	0	0	**472**
6:00 PM	1	321	91	0	11	0	0	0	0	0	0	0	0	**424**
7:00 PM	0	224	64	0	9	0	0	0	0	0	0	0	0	**297**
8:00 PM	0	163	44	0	1	0	0	0	0	0	0	0	0	**208**
9:00 PM	0	103	22	0	2	0	0	0	0	0	0	0	0	**127**
10:00 PM	0	37	12	0	1	0	0	0	0	0	0	0	0	**50**
11:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	**22**
Total	**7**	**3,473**	**908**	**33**	**118**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4,544**
	0.2%	**76.4%**	**20.0%**	**0.7%**	**2.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

DATA SOLUTIONS

Wednesday, April 2, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	4	5	0	0	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	20	7	0	3	0	0	0	0	0	0	0	0	**30**
5:00 AM	0	53	21	0	2	0	0	0	0	0	0	0	0	**76**
6:00 AM	1	145	43	2	10	0	0	0	0	0	0	0	0	**201**
7:00 AM	1	529	85	10	21	0	0	0	0	0	0	0	0	**646**
8:00 AM	0	330	61	5	1	1	0	0	0	0	0	0	0	**398**
9:00 AM	0	230	62	1	9	1	0	0	1	0	0	0	0	**304**
10:00 AM	0	188	41	0	6	1	0	0	0	0	0	0	0	**236**
11:00 AM	0	210	53	0	6	1	0	0	0	0	0	0	0	**270**
12:00 PM	2	181	38	1	12	1	0	0	1	0	0	0	0	**236**
1:00 PM	0	181	43	2	4	1	0	0	0	0	0	0	0	**231**
2:00 PM	0	246	46	0	10	1	0	0	0	0	0	0	0	**303**
3:00 PM	1	294	70	9	4	0	0	0	0	0	0	0	0	**378**
4:00 PM	0	359	69	3	6	0	0	0	0	0	0	0	0	**437**
5:00 PM	2	325	48	0	11	0	0	0	0	0	0	0	0	**386**
6:00 PM	0	214	45	0	8	0	0	0	0	0	0	0	0	**267**
7:00 PM	2	137	25	0	8	0	0	0	0	0	0	0	0	**172**
8:00 PM	0	79	21	0	2	0	0	0	0	0	0	0	0	**102**
9:00 PM	0	44	4	0	1	0	0	0	0	0	0	0	0	**49**
10:00 PM	0	16	2	0	0	0	0	0	0	0	0	0	0	**18**
11:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
Total	**9**	**3,805**	**792**	**33**	**124**	**7**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4,772**
	0.2%	**79.7%**	**16.6%**	**0.7%**	**2.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Wednesday, April 2, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	17	1	0	1	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	9	9	0	1	0	0	0	0	0	0	0	0	**19**
6:00 AM	0	34	12	5	1	0	0	0	0	0	0	0	0	**52**
7:00 AM	0	165	34	8	3	0	0	0	0	0	0	0	0	**210**
8:00 AM	1	184	62	2	9	1	0	0	0	0	0	0	0	**259**
9:00 AM	0	118	50	1	5	0	0	0	0	0	0	0	0	**174**
10:00 AM	0	137	50	0	5	0	0	0	0	0	0	0	0	**192**
11:00 AM	2	194	50	0	16	0	0	0	0	0	0	0	0	**262**
12:00 PM	0	189	56	1	8	0	0	0	0	0	0	0	0	**254**
1:00 PM	0	214	52	0	5	0	0	0	0	0	0	0	0	**271**
2:00 PM	1	213	65	3	5	0	0	0	1	0	0	0	0	**288**
3:00 PM	1	338	85	6	9	0	0	0	0	0	0	0	0	**439**
4:00 PM	0	311	60	1	14	0	0	0	1	0	0	0	0	**387**
5:00 PM	4	394	99	0	13	0	0	0	0	0	0	0	0	**510**
6:00 PM	0	301	82	0	8	0	0	0	0	0	0	0	0	**391**
7:00 PM	0	246	65	0	14	0	0	0	0	0	0	0	0	**325**
8:00 PM	0	187	46	0	3	0	0	0	0	0	0	0	0	**236**
9:00 PM	0	114	25	0	2	0	0	0	0	0	0	0	0	**141**
10:00 PM	0	42	12	0	4	0	0	0	0	0	0	0	0	**58**
11:00 PM	0	20	4	0	0	0	0	0	0	0	0	0	0	**24**
Total	**9**	**3,437**	**921**	**27**	**126**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4,523**
	0.2%	**76.0%**	**20.4%**	**0.6%**	**2.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Thursday, April 3, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	23	9	0	2	0	0	0	0	0	0	0	0	**34**
5:00 AM	0	61	19	0	4	0	0	0	0	0	0	0	0	**84**
6:00 AM	0	130	45	2	10	0	0	0	0	0	0	0	0	**187**
7:00 AM	0	408	89	5	12	0	0	0	0	0	0	0	0	**514**
8:00 AM	0	391	47	6	12	0	0	0	1	0	0	0	0	**457**
9:00 AM	1	362	57	2	10	1	0	0	0	0	0	0	0	**433**
10:00 AM	0	168	42	1	10	4	0	0	0	0	0	0	0	**225**
11:00 AM	0	229	42	0	7	3	0	0	0	0	0	0	0	**281**
12:00 PM	0	199	38	0	11	3	0	0	0	0	0	0	0	**251**
1:00 PM	0	161	41	3	8	0	0	0	0	0	0	0	0	**213**
2:00 PM	0	232	51	3	8	3	0	0	0	0	0	0	0	**297**
3:00 PM	1	279	64	4	7	3	0	0	0	0	0	0	0	**358**
4:00 PM	0	321	69	4	10	0	0	0	0	0	0	0	0	**404**
5:00 PM	0	324	47	0	10	0	0	0	0	0	0	0	0	**381**
6:00 PM	0	190	35	0	9	0	0	0	0	0	0	0	0	**234**
7:00 PM	0	107	22	0	5	0	0	0	0	0	0	0	0	**134**
8:00 PM	0	73	12	0	1	0	0	0	0	0	0	0	0	**86**
9:00 PM	0	39	12	0	2	0	0	0	0	0	0	0	0	**53**
10:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
11:00 PM	0	8	1	0	1	0	0	0	0	0	0	0	0	**10**
Total	**2**	**3,732**	**751**	**30**	**139**	**17**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4,672**
	0.0%	**79.9%**	**16.1%**	**0.6%**	**3.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

DATA SOLUTIONS

Thursday, April 3, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	12	9	0	2	0	0	0	0	0	0	0	0	**23**
6:00 AM	0	34	15	7	3	0	0	0	0	0	0	0	0	**59**
7:00 AM	0	125	39	8	9	0	0	0	0	0	0	0	0	**181**
8:00 AM	0	164	56	0	6	0	0	0	0	0	0	0	0	**226**
9:00 AM	1	146	52	1	11	0	0	0	0	0	0	0	0	**211**
10:00 AM	0	150	36	3	9	1	0	0	0	0	0	0	0	**199**
11:00 AM	0	204	57	2	13	1	0	0	0	0	0	0	0	**277**
12:00 PM	0	204	57	1	10	2	0	0	0	0	0	0	0	**274**
1:00 PM	0	189	65	4	6	4	0	0	0	0	0	0	0	**268**
2:00 PM	0	210	55	3	9	4	0	0	0	0	0	0	0	**281**
3:00 PM	0	344	93	4	7	2	0	0	0	0	0	0	0	**450**
4:00 PM	0	305	80	3	13	2	0	0	0	0	0	0	0	**403**
5:00 PM	0	357	90	0	17	0	0	0	0	0	0	0	0	**464**
6:00 PM	0	245	59	0	10	1	0	0	0	0	0	0	0	**315**
7:00 PM	0	199	71	0	8	0	0	0	0	0	0	0	0	**278**
8:00 PM	0	160	44	0	4	0	0	0	0	0	0	0	0	**208**
9:00 PM	0	73	29	0	6	0	0	0	0	0	0	0	0	**108**
10:00 PM	0	36	15	0	3	0	0	0	0	0	0	0	0	**54**
11:00 PM	0	19	5	0	0	0	0	0	0	0	0	0	0	**24**
Total	**1**	**3,200**	**934**	**36**	**147**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,335**
	0.0%	**73.8%**	**21.5%**	**0.8%**	**3.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Total Study Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	22	7	0	3	0	0	0	0	0	0	0	0	**32**
5:00 AM	0	57	20	0	4	0	0	0	0	0	0	0	0	**81**
6:00 AM	0	131	43	2	8	0	0	0	0	0	0	0	0	**184**
7:00 AM	1	456	90	7	16	0	0	0	0	0	0	0	0	**570**
8:00 AM	0	376	55	5	8	1	0	0	0	0	0	0	0	**445**
9:00 AM	0	298	58	2	8	2	0	0	0	0	0	0	0	**368**
10:00 AM	0	183	45	1	6	2	0	0	0	0	0	0	0	**237**
11:00 AM	0	225	48	1	7	2	0	0	0	0	0	0	0	**283**
12:00 PM	1	199	42	1	12	2	0	0	0	0	0	0	0	**257**
1:00 PM	0	183	42	2	5	0	0	0	0	0	0	0	0	**232**
2:00 PM	0	236	51	1	9	1	0	0	0	0	0	0	0	**298**
3:00 PM	1	287	64	7	5	1	0	0	0	0	0	0	0	**365**
4:00 PM	0	333	73	4	8	0	0	0	0	0	0	0	0	**418**
5:00 PM	1	332	53	0	9	0	0	0	0	0	0	0	0	**395**
6:00 PM	0	197	36	0	7	0	0	0	0	0	0	0	0	**240**
7:00 PM	1	125	21	0	5	0	0	0	0	0	0	0	0	**152**
8:00 PM	0	74	15	0	1	0	0	0	0	0	0	0	0	**90**
9:00 PM	0	41	7	0	1	0	0	0	0	0	0	0	0	**49**
10:00 PM	0	17	3	0	0	0	0	0	0	0	0	0	0	**20**
11:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
Total	**5**	**3,792**	**779**	**33**	**122**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,742**
	0.1%	**80.0%**	**16.4%**	**0.7%**	**2.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Total Study Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	1	0	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	10	10	0	1	0	0	0	0	0	0	0	0	**21**
6:00 AM	0	34	13	7	2	0	0	0	0	0	0	0	0	**56**
7:00 AM	0	142	36	7	5	0	0	0	0	0	0	0	0	**190**
8:00 AM	0	182	54	1	9	0	0	0	0	0	0	0	0	**246**
9:00 AM	0	139	53	1	7	0	0	0	0	0	0	0	0	**200**
10:00 AM	0	147	41	2	9	0	0	0	0	0	0	0	0	**199**
11:00 AM	1	206	52	2	13	1	0	0	0	0	0	0	0	**275**
12:00 PM	0	193	59	1	9	1	0	0	0	0	0	0	0	**263**
1:00 PM	0	212	57	2	7	2	0	0	0	0	0	0	0	**280**
2:00 PM	0	215	58	4	7	1	0	0	0	0	0	0	0	**285**
3:00 PM	1	341	86	4	8	1	0	0	0	0	0	0	0	**441**
4:00 PM	0	314	72	2	12	1	0	0	0	0	0	0	0	**401**
5:00 PM	3	373	93	0	13	0	0	0	0	0	0	0	0	**482**
6:00 PM	0	289	77	0	10	0	0	0	0	0	0	0	0	**376**
7:00 PM	0	223	67	0	10	0	0	0	0	0	0	0	0	**300**
8:00 PM	0	170	45	0	3	0	0	0	0	0	0	0	0	**218**
9:00 PM	0	97	25	0	3	0	0	0	0	0	0	0	0	**125**
10:00 PM	0	38	13	0	3	0	0	0	0	0	0	0	0	**54**
11:00 PM	0	19	4	0	0	0	0	0	0	0	0	0	0	**23**
Total	**5**	**3,369**	**920**	**33**	**131**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,465**
	0.1%	**75.5%**	**20.6%**	**0.7%**	**2.9%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

TJ Wethington: 720-646-1008
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Vehicle Speed Report Summary

Location: 82nd Ave E/O Orion Way

Direction: Eastbound / Westbound

Date Range: 4/1/2025 to 4/3/2025

Site Code: 04

Direction	Speed Range (mph)																Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Eastbound	0	2	8	69	1,141	1,974	2,311	5,136	2,958	532	78	18	3	0	1	0	0	**14,231**
	0.0%	0.0%	0.1%	0.5%	8.0%	13.9%	16.2%	36.1%	20.8%	3.7%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Westbound	0	1	14	279	1,855	1,587	2,870	4,801	1,622	315	40	13	2	1	2	0	0	**13,402**
	0.0%	0.0%	0.1%	2.1%	13.8%	11.8%	21.4%	35.8%	12.1%	2.4%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	0	3	22	348	2,996	3,561	5,181	9,937	4,580	847	118	31	5	1	3	0	0	**27,633**
	0.0%	0.0%	0.1%	1.3%	10.8%	12.9%	18.7%	36.0%	16.6%	3.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	41.7	mph	Mean (Average) Speed	40.5	mph
85th Percentile	46.8	mph	10 mph Pace	38.5 - 48.5	mph
95th Percentile	49.7	mph	Percent in Pace	60.1	%
Westbound			**Westbound**		
50th Percentile (Median)	40.0	mph	Mean (Average) Speed	38.7	mph
85th Percentile	45.0	mph	10 mph Pace	36.8 - 46.8	mph
95th Percentile	48.1	mph	Percent in Pace	59.6	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Tuesday, April 1, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	2	1	0	1	1	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	0	2	1	1	3	1	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	0	0	2	3	4	9	11	1	2	0	0	0	0	0	0	**32**
5:00 AM	0	0	0	1	5	15	7	22	22	8	3	0	0	0	0	0	0	**83**
6:00 AM	0	0	0	1	23	25	15	62	29	9	2	0	0	0	0	0	0	**166**
7:00 AM	0	2	6	6	53	83	83	231	74	6	3	0	0	0	0	0	0	**547**
8:00 AM	0	0	0	0	28	82	78	195	89	8	0	0	0	0	0	0	0	**480**
9:00 AM	0	0	0	2	30	59	66	115	76	20	1	0	0	0	0	0	0	**369**
10:00 AM	0	0	0	4	22	36	48	77	51	8	0	0	0	0	0	0	0	**246**
11:00 AM	0	0	0	3	29	50	52	106	50	7	0	0	0	0	0	0	0	**297**
12:00 PM	0	0	0	5	29	41	70	87	43	6	1	2	0	0	0	0	0	**284**
1:00 PM	0	0	0	3	27	34	59	79	39	7	3	0	0	0	0	0	0	**251**
2:00 PM	0	0	0	1	32	46	47	115	47	9	0	0	0	0	0	0	0	**297**
3:00 PM	0	0	0	1	29	46	69	111	92	12	0	0	0	0	0	0	0	**360**
4:00 PM	0	0	0	2	18	45	47	161	114	21	2	1	1	0	0	0	0	**412**
5:00 PM	0	0	0	2	22	49	58	164	98	22	3	0	0	0	0	0	0	**418**
6:00 PM	0	0	0	1	14	22	32	82	57	8	1	0	0	0	0	0	0	**217**
7:00 PM	0	0	0	0	9	19	23	65	29	5	0	0	0	0	0	0	0	**150**
8:00 PM	0	0	0	1	12	6	14	27	16	3	1	3	0	0	0	0	0	**83**
9:00 PM	0	0	0	2	5	8	10	10	9	2	0	0	0	0	0	0	0	**46**
10:00 PM	0	0	0	0	2	6	6	8	0	2	1	0	0	0	0	0	0	**25**
11:00 PM	0	0	0	0	1	2	1	0	2	1	0	0	0	0	0	0	0	**7**
Total	**0**	**2**	**6**	**35**	**397**	**679**	**791**	**1,731**	**950**	**165**	**23**	**7**	**1**	**0**	**0**	**0**	**0**	**4,787**
	0.0%	**0.0%**	**0.1%**	**0.7%**	**8.3%**	**14.2%**	**16.5%**	**36.2%**	**19.8%**	**3.4%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	41.4	mph	Mean (Average) Speed	40.2	mph
85th Percentile	46.6	mph	10 mph Pace	37.8 - 47.8	mph
95th Percentile	49.3	mph	Percent in Pace	60.0	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Tuesday, April 1, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	2	3	3	3	1	1	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	0	0	1	2	0	1	1	0	0	1	0	0	0	0	0	**6**
2:00 AM	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	1	0	1	3	2	0	0	1	0	0	0	0	0	**8**
5:00 AM	0	0	1	0	1	0	3	9	5	1	0	1	0	0	0	0	0	**21**
6:00 AM	0	0	0	3	5	10	10	17	10	3	1	0	0	0	0	0	0	**59**
7:00 AM	0	0	0	4	28	32	54	47	15	1	0	0	0	0	0	0	0	**181**
8:00 AM	0	0	0	3	25	31	60	102	30	6	0	0	0	0	0	0	0	**257**
9:00 AM	0	0	0	9	36	30	54	66	16	4	0	0	0	0	0	0	0	**215**
10:00 AM	0	0	0	4	28	37	54	64	18	1	0	0	0	0	0	0	0	**206**
11:00 AM	0	0	0	6	36	31	65	99	37	7	0	0	0	0	0	0	0	**281**
12:00 PM	0	0	0	8	38	36	63	82	27	5	0	1	0	0	0	0	0	**260**
1:00 PM	0	0	0	10	42	37	74	96	31	6	2	0	0	0	0	0	0	**298**
2:00 PM	0	0	0	6	41	35	55	104	39	8	0	0	0	0	0	0	0	**288**
3:00 PM	0	1	3	13	47	48	108	151	54	8	2	0	0	0	0	0	0	**435**
4:00 PM	0	0	0	2	56	60	93	140	51	11	0	0	0	0	0	0	0	**413**
5:00 PM	0	0	3	1	53	56	66	209	74	10	0	0	0	0	0	0	0	**472**
6:00 PM	0	0	0	5	61	46	86	162	55	6	2	0	1	0	0	0	0	**424**
7:00 PM	0	0	0	7	48	26	76	113	22	5	0	0	0	0	0	0	0	**297**
8:00 PM	0	0	0	10	28	21	41	74	27	4	2	1	0	0	0	0	0	**208**
9:00 PM	0	0	1	4	24	13	20	34	22	5	4	0	0	0	0	0	0	**127**
10:00 PM	0	0	0	1	7	5	8	18	6	5	0	0	0	0	0	0	0	**50**
11:00 PM	0	0	0	0	7	2	4	3	3	2	1	0	0	0	0	0	0	**22**
Total	**0**	**1**	**8**	**96**	**615**	**561**	**999**	**1,597**	**547**	**99**	**15**	**5**	**1**	**0**	**0**	**0**	**0**	**4,544**
	0.0%	**0.0%**	**0.2%**	**2.1%**	**13.5%**	**12.3%**	**22.0%**	**35.1%**	**12.0%**	**2.2%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	39.9	mph	Mean (Average) Speed	38.6	mph
85th Percentile	45.0	mph	10 mph Pace	36.4 - 46.4	mph
95th Percentile	47.9	mph	Percent in Pace	59.4	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Wednesday, April 2, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	2	1	0	1	2	1	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	0	0	4	1	1	2	1	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	0	0	0	2	3	3	9	10	2	1	0	0	0	0	0	0	**30**
5:00 AM	0	0	0	1	7	11	4	16	26	8	3	0	0	0	0	0	0	**76**
6:00 AM	0	0	0	3	20	27	27	70	50	3	1	0	0	0	0	0	0	**201**
7:00 AM	0	0	0	0	42	93	100	231	159	18	3	0	0	0	0	0	0	**646**
8:00 AM	0	0	0	1	36	60	51	145	93	10	2	0	0	0	0	0	0	**398**
9:00 AM	0	0	0	1	30	33	55	99	65	19	2	0	0	0	0	0	0	**304**
10:00 AM	0	0	0	1	26	42	33	85	43	6	0	0	0	0	0	0	0	**236**
11:00 AM	0	0	0	1	21	37	43	96	61	10	1	0	0	0	0	0	0	**270**
12:00 PM	0	0	1	3	26	33	38	70	54	9	2	0	0	0	0	0	0	**236**
1:00 PM	0	0	0	1	19	40	33	94	37	6	0	1	0	0	0	0	0	**231**
2:00 PM	0	0	0	1	29	38	38	113	65	16	1	2	0	0	0	0	0	**303**
3:00 PM	0	0	0	0	25	47	59	140	84	17	3	3	0	0	0	0	0	**378**
4:00 PM	0	0	0	2	26	53	52	172	102	27	2	0	1	0	0	0	0	**437**
5:00 PM	0	0	0	0	19	43	51	148	101	21	3	0	0	0	0	0	0	**386**
6:00 PM	0	0	0	0	20	38	42	90	60	14	3	0	0	0	0	0	0	**267**
7:00 PM	0	0	0	1	13	25	36	51	35	10	0	1	0	0	0	0	0	**172**
8:00 PM	0	0	0	0	12	16	24	32	17	1	0	0	0	0	0	0	0	**102**
9:00 PM	0	0	0	1	7	1	8	17	9	4	1	0	0	0	1	0	0	**49**
10:00 PM	0	0	0	0	2	0	5	4	4	3	0	0	0	0	0	0	0	**18**
11:00 PM	0	0	0	0	1	0	1	1	4	0	0	0	0	0	0	0	0	**7**
Total	**0**	**0**	**1**	**18**	**390**	**644**	**707**	**1,687**	**1,083**	**205**	**28**	**7**	**1**	**0**	**1**	**0**	**0**	**4,772**
	0.0%	**0.0%**	**0.0%**	**0.4%**	**8.2%**	**13.5%**	**14.8%**	**35.4%**	**22.7%**	**4.3%**	**0.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	42.2	mph	Mean (Average) Speed	40.8	mph
85th Percentile	47.1	mph	10 mph Pace	39.1 - 49.1	mph
95th Percentile	50.0	mph	Percent in Pace	60.0	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Wednesday, April 2, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	7	3	1	3	1	1	0	1	0	0	0	0	0	**19**
1:00 AM	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	1	0	1	2	1	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	0	0	0	0	0	5	9	3	1	1	0	0	0	0	0	0	**19**
6:00 AM	0	0	0	1	3	6	16	12	12	2	0	0	0	0	0	0	0	**52**
7:00 AM	0	0	0	2	28	21	50	83	20	5	1	0	0	0	0	0	0	**210**
8:00 AM	0	0	0	6	42	24	74	90	20	3	0	0	0	0	0	0	0	**259**
9:00 AM	0	0	0	7	16	19	38	60	24	7	2	1	0	0	0	0	0	**174**
10:00 AM	0	0	0	4	24	22	38	78	19	6	1	0	0	0	0	0	0	**192**
11:00 AM	0	0	0	3	51	25	53	103	23	3	1	0	0	0	0	0	0	**262**
12:00 PM	0	0	1	6	41	34	66	82	22	1	0	0	0	0	1	0	0	**254**
1:00 PM	0	0	0	2	40	33	54	100	30	12	0	0	0	0	0	0	0	**271**
2:00 PM	0	0	0	0	39	30	46	120	45	6	1	1	0	0	0	0	0	**288**
3:00 PM	0	0	0	9	56	52	88	184	38	12	0	0	0	0	0	0	0	**439**
4:00 PM	0	0	4	2	58	44	72	154	39	12	2	0	0	0	0	0	0	**387**
5:00 PM	0	0	0	5	74	53	131	177	57	9	3	1	0	0	0	0	0	**510**
6:00 PM	0	0	0	5	48	59	63	132	72	11	0	1	0	0	0	0	0	**391**
7:00 PM	0	0	0	10	51	41	84	108	29	2	0	0	0	0	0	0	0	**325**
8:00 PM	0	0	1	11	41	25	65	76	16	1	0	0	0	0	0	0	0	**236**
9:00 PM	0	0	0	1	21	15	38	48	13	3	2	0	0	0	0	0	0	**141**
10:00 PM	0	0	0	3	8	3	7	23	8	4	0	1	0	0	1	0	0	**58**
11:00 PM	0	0	0	2	2	1	5	5	7	2	0	0	0	0	0	0	0	**24**
Total	**0**	**0**	**6**	**81**	**652**	**511**	**997**	**1,651**	**500**	**103**	**14**	**6**	**0**	**0**	**2**	**0**	**0**	**4,523**
	0.0%	**0.0%**	**0.1%**	**1.8%**	**14.4%**	**11.3%**	**22.0%**	**36.5%**	**11.1%**	**2.3%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	40.0	mph	Mean (Average) Speed	38.6	mph
85th Percentile	44.7	mph	10 mph Pace	36.8 - 46.8	mph
95th Percentile	47.9	mph	Percent in Pace	60.56	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Thursday, April 3, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	1	1	1	2	3	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	0	1	4	2	3	10	9	3	2	0	0	0	0	0	0	**34**
5:00 AM	0	0	0	0	6	12	7	27	21	7	4	0	0	0	0	0	0	**84**
6:00 AM	0	0	0	0	13	33	17	58	48	13	5	0	0	0	0	0	0	**187**
7:00 AM	0	0	0	0	32	76	64	212	114	14	2	0	0	0	0	0	0	**514**
8:00 AM	0	0	0	0	19	67	109	181	70	9	2	0	0	0	0	0	0	**457**
9:00 AM	0	0	0	0	33	59	72	159	87	22	0	1	0	0	0	0	0	**433**
10:00 AM	0	0	0	1	26	44	55	68	25	2	4	0	0	0	0	0	0	**225**
11:00 AM	0	0	0	3	21	38	60	103	51	5	0	0	0	0	0	0	0	**281**
12:00 PM	0	0	0	3	24	19	64	95	41	2	2	1	0	0	0	0	0	**251**
1:00 PM	0	0	0	3	27	28	39	68	37	10	1	0	0	0	0	0	0	**213**
2:00 PM	0	0	1	0	30	49	56	99	59	3	0	0	0	0	0	0	0	**297**
3:00 PM	0	0	0	1	12	42	58	146	86	13	0	0	0	0	0	0	0	**358**
4:00 PM	0	0	0	0	26	62	57	145	94	19	1	0	0	0	0	0	0	**404**
5:00 PM	0	0	0	0	23	46	48	173	72	17	1	1	0	0	0	0	0	**381**
6:00 PM	0	0	0	0	16	31	41	85	50	9	2	0	0	0	0	0	0	**234**
7:00 PM	0	0	0	1	19	19	29	40	21	4	0	0	1	0	0	0	0	**134**
8:00 PM	0	0	0	3	11	12	15	23	17	4	1	0	0	0	0	0	0	**86**
9:00 PM	0	0	0	0	8	5	10	14	12	3	0	1	0	0	0	0	0	**53**
10:00 PM	0	0	0	0	1	2	5	4	5	2	0	0	0	0	0	0	0	**19**
11:00 PM	0	0	0	0	1	1	3	2	3	0	0	0	0	0	0	0	0	**10**
Total	**0**	**0**	**1**	**16**	**354**	**651**	**813**	**1,718**	**925**	**162**	**27**	**4**	**1**	**0**	**0**	**0**	**0**	**4,672**
	0.0%	**0.0%**	**0.0%**	**0.3%**	**7.6%**	**13.9%**	**17.4%**	**36.8%**	**19.8%**	**3.5%**	**0.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	41.6	mph	Mean (Average) Speed	40.4	mph
85th Percentile	46.5	mph	10 mph Pace	37.6 - 47.6	mph
95th Percentile	49.5	mph	Percent in Pace	61.2	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Thursday, April 3, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	2	3	1	2	1	0	0	0	1	1	0	0	0	**12**
1:00 AM	0	0	0	0	2	1	3	4	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	4	1	0	1	0	0	0	0	0	0	**6**
5:00 AM	0	0	0	1	0	3	1	12	4	1	1	0	0	0	0	0	0	**23**
6:00 AM	0	0	0	1	3	7	10	22	10	6	0	0	0	0	0	0	0	**59**
7:00 AM	0	0	0	1	20	18	27	78	30	7	0	0	0	0	0	0	0	**181**
8:00 AM	0	0	0	1	27	20	39	81	43	14	1	0	0	0	0	0	0	**226**
9:00 AM	0	0	0	3	31	24	46	72	33	2	0	0	0	0	0	0	0	**211**
10:00 AM	0	0	0	8	24	22	45	69	24	7	0	0	0	0	0	0	0	**199**
11:00 AM	0	0	0	7	29	29	69	97	41	5	0	0	0	0	0	0	0	**277**
12:00 PM	0	0	0	4	29	38	47	113	33	8	1	1	0	0	0	0	0	**274**
1:00 PM	0	0	0	3	39	40	53	98	28	7	0	0	0	0	0	0	0	**268**
2:00 PM	0	0	0	8	44	27	51	102	42	6	1	0	0	0	0	0	0	**281**
3:00 PM	0	0	0	5	57	67	93	150	67	11	0	0	0	0	0	0	0	**450**
4:00 PM	0	0	0	6	42	58	76	161	46	13	1	0	0	0	0	0	0	**403**
5:00 PM	0	0	0	2	62	58	86	189	59	7	1	0	0	0	0	0	0	**464**
6:00 PM	0	0	0	12	57	34	67	102	39	3	1	0	0	0	0	0	0	**315**
7:00 PM	0	0	0	12	53	29	48	97	31	5	3	0	0	0	0	0	0	**278**
8:00 PM	0	0	0	17	34	16	70	53	16	1	0	1	0	0	0	0	0	**208**
9:00 PM	0	0	0	3	18	12	20	31	17	7	0	0	0	0	0	0	0	**108**
10:00 PM	0	0	0	5	9	6	14	11	6	3	0	0	0	0	0	0	0	**54**
11:00 PM	0	0	0	2	5	3	6	5	3	0	0	0	0	0	0	0	0	**24**
Total	**0**	**0**	**0**	**102**	**588**	**515**	**874**	**1,553**	**575**	**113**	**11**	**2**	**1**	**1**	**0**	**0**	**0**	**4,335**
	0.0%	**0.0%**	**0.0%**	**2.4%**	**13.6%**	**11.9%**	**20.2%**	**35.8%**	**13.3%**	**2.6%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	40.3	mph	Mean (Average) Speed	38.8	mph
85th Percentile	45.3	mph	10 mph Pace	36.7 - 46.7	mph
95th Percentile	48.5	mph	Percent in Pace	59.03	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Total Study Average
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	0	2	1	1	2	2	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	0	0	3	3	3	9	10	2	2	0	0	0	0	0	0	**32**
5:00 AM	0	0	0	1	6	13	6	22	23	8	3	0	0	0	0	0	0	**82**
6:00 AM	0	0	0	1	19	28	20	63	42	8	3	0	0	0	0	0	0	**184**
7:00 AM	0	1	2	2	42	84	82	225	116	13	3	0	0	0	0	0	0	**570**
8:00 AM	0	0	0	0	28	70	79	174	84	9	1	0	0	0	0	0	0	**445**
9:00 AM	0	0	0	1	31	50	64	124	76	20	1	0	0	0	0	0	0	**367**
10:00 AM	0	0	0	2	25	41	45	77	40	5	1	0	0	0	0	0	0	**236**
11:00 AM	0	0	0	2	24	42	52	102	54	7	0	0	0	0	0	0	0	**283**
12:00 PM	0	0	0	4	26	31	57	84	46	6	2	1	0	0	0	0	0	**257**
1:00 PM	0	0	0	2	24	34	44	80	38	8	1	0	0	0	0	0	0	**231**
2:00 PM	0	0	0	1	30	44	47	109	57	9	0	1	0	0	0	0	0	**298**
3:00 PM	0	0	0	1	22	45	62	132	87	14	1	1	0	0	0	0	0	**365**
4:00 PM	0	0	0	1	23	53	52	159	103	22	2	0	1	0	0	0	0	**416**
5:00 PM	0	0	0	1	21	46	52	162	90	20	2	0	0	0	0	0	0	**394**
6:00 PM	0	0	0	0	17	30	38	86	56	10	2	0	0	0	0	0	0	**239**
7:00 PM	0	0	0	1	14	21	29	52	28	6	0	0	0	0	0	0	0	**151**
8:00 PM	0	0	0	1	12	11	18	27	17	3	1	1	0	0	0	0	0	**91**
9:00 PM	0	0	0	1	7	5	9	14	10	3	0	0	0	0	0	0	0	**49**
10:00 PM	0	0	0	0	2	3	5	5	3	2	0	0	0	0	0	0	0	**20**
11:00 PM	0	0	0	0	1	1	2	1	3	0	0	0	0	0	0	0	0	**8**
Total	**0**	**1**	**2**	**22**	**381**	**658**	**769**	**1,712**	**986**	**175**	**25**	**4**	**1**	**0**	**0**	**0**	**0**	**4,736**
	0.0%	**0.0%**	**0.0%**	**0.5%**	**8.0%**	**13.9%**	**16.2%**	**36.1%**	**20.8%**	**3.7%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	41.7	mph	Mean (Average) Speed	40.5	mph
85th Percentile	46.8	mph	10 mph Pace	38.5 - 48.5	mph
95th Percentile	49.7	mph	Percent in Pace	60.1	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 to 4/3/2025
Site Code: 04

Total Study Average
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	4	3	2	3	1	1	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	0	0	1	1	1	2	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	1	0	1	3	1	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	0	0	0	0	1	3	10	4	1	1	0	0	0	0	0	0	**20**
6:00 AM	0	0	0	2	4	8	12	17	11	4	0	0	0	0	0	0	0	**58**
7:00 AM	0	0	0	2	25	24	44	69	22	4	0	0	0	0	0	0	0	**190**
8:00 AM	0	0	0	3	31	25	58	91	31	8	0	0	0	0	0	0	0	**247**
9:00 AM	0	0	0	6	28	24	46	66	24	4	1	0	0	0	0	0	0	**199**
10:00 AM	0	0	0	5	25	27	46	70	20	5	0	0	0	0	0	0	0	**198**
11:00 AM	0	0	0	5	39	28	62	100	34	5	0	0	0	0	0	0	0	**273**
12:00 PM	0	0	0	6	36	36	59	92	27	5	0	1	0	0	0	0	0	**262**
1:00 PM	0	0	0	5	40	37	60	98	30	8	1	0	0	0	0	0	0	**279**
2:00 PM	0	0	0	5	41	31	51	109	42	7	1	0	0	0	0	0	0	**287**
3:00 PM	0	0	1	9	53	56	96	162	53	10	1	0	0	0	0	0	0	**441**
4:00 PM	0	0	1	3	52	54	80	152	45	12	1	0	0	0	0	0	0	**400**
5:00 PM	0	0	1	3	63	56	94	192	63	9	1	0	0	0	0	0	0	**482**
6:00 PM	0	0	0	7	55	46	72	132	55	7	1	0	0	0	0	0	0	**375**
7:00 PM	0	0	0	10	51	32	69	106	27	4	1	0	0	0	0	0	0	**300**
8:00 PM	0	0	0	13	34	21	59	68	20	2	1	1	0	0	0	0	0	**219**
9:00 PM	0	0	0	3	21	13	26	38	17	5	2	0	0	0	0	0	0	**125**
10:00 PM	0	0	0	3	8	5	10	17	7	4	0	0	0	0	0	0	0	**54**
11:00 PM	0	0	0	1	5	2	5	4	4	1	0	0	0	0	0	0	0	**22**
Total	**0**	**0**	**3**	**92**	**617**	**530**	**957**	**1,601**	**539**	**106**	**12**	**2**	**0**	**0**	**0**	**0**	**0**	**4,459**
	0.0%	**0.0%**	**0.1%**	**2.1%**	**13.8%**	**11.9%**	**21.5%**	**35.9%**	**12.1%**	**2.4%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	40.0	mph	Mean (Average) Speed	38.7	mph
85th Percentile	45.0	mph	10 mph Pace	36.8 - 46.8	mph
95th Percentile	48.1	mph	Percent in Pace	59.6	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Orion Way
Date Range: 4/1/2025 - 4/7/2025
Site Code: 04

Time	Tuesday 4/1/2025			Wednesday 4/2/2025			Thursday 4/3/2025			Friday 4/4/2025			Saturday 4/5/2025			Sunday 4/6/2025			Monday 4/7/2025			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	3	13	16	6	19	25	3	12	15	-	-	-	-	-	-	-	-	-	-	-	-	4	15	19
1:00 AM	1	6	7	3	4	7	4	10	14	-	-	-	-	-	-	-	-	-	-	-	-	3	7	9
2:00 AM	5	3	8	7	3	10	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-	5	3	8
3:00 AM	8	0	8	9	0	9	8	1	9	-	-	-	-	-	-	-	-	-	-	-	-	8	0	9
4:00 AM	32	8	40	30	5	35	34	6	40	-	-	-	-	-	-	-	-	-	-	-	-	32	6	38
5:00 AM	83	21	104	76	19	95	84	23	107	-	-	-	-	-	-	-	-	-	-	-	-	81	21	102
6:00 AM	166	59	225	201	52	253	187	59	246	-	-	-	-	-	-	-	-	-	-	-	-	185	57	241
7:00 AM	**547**	181	728	**646**	210	**856**	**514**	181	**695**	-	-	-	-	-	-	-	-	-	-	-	-	**569**	191	**760**
8:00 AM	480	257	**737**	398	259	657	457	226	683	-	-	-	-	-	-	-	-	-	-	-	-	445	247	692
9:00 AM	369	215	584	304	174	478	433	211	644	-	-	-	-	-	-	-	-	-	-	-	-	369	200	569
10:00 AM	246	206	452	236	192	428	225	199	424	-	-	-	-	-	-	-	-	-	-	-	-	236	199	435
11:00 AM	297	**281**	578	270	**262**	532	281	**277**	558	-	-	-	-	-	-	-	-	-	-	-	-	283	**273**	556
12:00 PM	284	260	544	236	254	490	251	274	525	-	-	-	-	-	-	-	-	-	-	-	-	257	263	520
1:00 PM	251	298	549	231	271	502	213	268	481	-	-	-	-	-	-	-	-	-	-	-	-	232	279	511
2:00 PM	297	288	585	303	288	591	297	281	578	-	-	-	-	-	-	-	-	-	-	-	-	299	286	585
3:00 PM	360	435	795	378	439	817	358	450	808	-	-	-	-	-	-	-	-	-	-	-	-	365	441	807
4:00 PM	412	413	825	**437**	387	824	**404**	403	807	-	-	-	-	-	-	-	-	-	-	-	-	**418**	401	819
5:00 PM	**418**	**472**	**890**	386	**510**	**896**	381	**464**	**845**	-	-	-	-	-	-	-	-	-	-	-	-	395	**482**	**877**
6:00 PM	217	424	641	267	391	658	234	315	549	-	-	-	-	-	-	-	-	-	-	-	-	239	377	616
7:00 PM	150	297	447	172	325	497	134	278	412	-	-	-	-	-	-	-	-	-	-	-	-	152	300	452
8:00 PM	83	208	291	102	236	338	86	208	294	-	-	-	-	-	-	-	-	-	-	-	-	90	217	308
9:00 PM	46	127	173	49	141	190	53	108	161	-	-	-	-	-	-	-	-	-	-	-	-	49	125	175
10:00 PM	25	50	75	18	58	76	19	54	73	-	-	-	-	-	-	-	-	-	-	-	-	21	54	75
11:00 PM	7	22	29	7	24	31	10	24	34	-	-	-	-	-	-	-	-	-	-	-	-	8	23	31
Total	**4,787**	**4,544**	**9,331**	**4,772**	**4,523**	**9,295**	**4,672**	**4,335**	**9,007**	-	-	-	-	-	-	-	-	-	-	-	-	**4,744**	**4,467**	**9,211**
Percent	**51%**	**49%**		**51%**	**49%**		**52%**	**48%**		-	-		-	-		-	-		-	-		**52%**	**48%**	
AM Peak	07:00	11:00	08:00	07:00	11:00	07:00	07:00	11:00	07:00	-	-	-	-	-	-	-	-	-	-	-	-	07:00	11:00	07:00
Vol.	547	281	737	646	262	856	514	277	695	-	-	-	-	-	-	-	-	-	-	-	-	569	273	760
PM Peak	17:00	17:00	17:00	16:00	17:00	17:00	16:00	17:00	17:00	-	-	-	-	-	-	-	-	-	-	-	-	16:00	17:00	17:00
Vol.	418	472	890	437	510	896	404	464	845	-	-	-	-	-	-	-	-	-	-	-	-	418	482	877

1. Mid-week average includes data between Tuesday and Thursday.

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Vehicle Classification Report Summary

Location: 82nd Ave E/O Yule Way

Count Direction: Eastbound / Westbound

Date Range: 4/8/2025 to 4/10/2025

Site Code: 05

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Eastbound	39	4,419	1,098	32	193	22	0	2	2	0	0	0	1	5,808
	0.7%	76.1%	18.9%	0.6%	3.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Westbound	37	4,114	1,050	37	179	34	0	2	2	1	0	0	0	5,456
	0.7%	75.4%	19.2%	0.7%	3.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	76	8,533	2,148	69	372	56	0	4	4	1	0	0	1	11,264
	0.7%	75.8%	19.1%	0.6%	3.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Tuesday, April 8, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	9	3	0	1	0	0	0	0	0	0	0	0	**13**
5:00 AM	0	13	7	0	1	0	0	0	0	0	0	0	0	**21**
6:00 AM	0	47	15	0	4	0	0	0	0	0	0	0	0	**66**
7:00 AM	0	162	51	1	8	0	0	1	0	0	0	0	0	**223**
8:00 AM	0	104	31	0	5	1	0	0	0	0	0	0	0	**141**
9:00 AM	0	82	22	0	5	1	0	0	0	0	0	0	0	**110**
10:00 AM	0	65	15	0	3	0	0	0	0	0	0	0	0	**83**
11:00 AM	1	70	13	0	2	1	0	0	0	0	0	0	0	**87**
12:00 PM	1	49	15	0	7	0	0	0	0	0	0	0	0	**72**
1:00 PM	0	64	12	0	3	0	0	0	0	0	0	0	0	**79**
2:00 PM	1	101	15	1	3	0	0	0	0	0	0	0	0	**121**
3:00 PM	3	142	34	3	2	0	0	1	0	0	0	0	0	**185**
4:00 PM	2	167	28	2	8	0	0	0	0	0	0	0	0	**207**
5:00 PM	1	135	42	0	5	0	0	0	0	0	0	0	0	**183**
6:00 PM	0	84	24	0	5	1	0	0	0	0	0	0	0	**114**
7:00 PM	1	45	11	0	3	0	0	0	0	0	0	0	0	**60**
8:00 PM	0	27	9	0	1	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
10:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
Total	**10**	**1,400**	**359**	**7**	**66**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1,848**
	0.5%	**75.8%**	**19.4%**	**0.4%**	**3.6%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Tuesday, April 8, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	11	5	0	1	0	0	0	0	0	0	0	0	**17**
6:00 AM	0	38	17	2	3	0	0	0	0	0	0	0	0	**60**
7:00 AM	0	89	18	2	6	0	0	0	0	0	0	0	0	**115**
8:00 AM	1	87	22	1	5	0	0	1	0	1	0	0	0	**118**
9:00 AM	0	59	23	0	5	2	0	0	0	0	0	0	0	**89**
10:00 AM	0	55	13	1	2	1	0	0	0	0	0	0	0	**72**
11:00 AM	1	69	13	1	4	0	0	0	0	0	0	0	0	**88**
12:00 PM	2	59	24	0	4	0	0	0	0	0	0	0	0	**89**
1:00 PM	1	65	22	0	4	0	0	0	0	0	0	0	0	**92**
2:00 PM	1	78	19	2	3	2	0	0	0	0	0	0	0	**105**
3:00 PM	2	124	27	1	5	2	0	1	0	0	0	0	0	**162**
4:00 PM	0	107	27	0	6	0	0	0	0	0	0	0	0	**140**
5:00 PM	1	133	33	0	8	0	0	0	0	0	0	0	0	**175**
6:00 PM	1	101	28	0	3	0	0	0	0	0	0	0	0	**133**
7:00 PM	1	98	26	0	1	0	0	0	0	0	0	0	0	**126**
8:00 PM	0	81	14	0	1	0	0	0	0	0	0	0	0	**96**
9:00 PM	1	33	7	0	1	0	0	0	0	0	0	0	0	**42**
10:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
11:00 PM	0	11	4	0	0	0	0	0	0	0	0	0	0	**15**
Total	**13**	**1,317**	**350**	**10**	**63**	**7**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1,763**
	0.7%	**74.7%**	**19.9%**	**0.6%**	**3.6%**	**0.4%**	**0.0%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Wednesday, April 9, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	13	3	0	1	0	0	0	0	0	0	0	0	**17**
5:00 AM	0	24	2	0	2	0	0	0	0	0	0	0	0	**28**
6:00 AM	0	43	19	1	5	1	0	0	0	0	0	0	0	**69**
7:00 AM	0	174	49	1	6	0	0	0	0	0	0	0	0	**230**
8:00 AM	1	129	20	1	7	0	0	0	0	0	0	0	0	**158**
9:00 AM	0	78	25	0	2	3	0	0	0	0	0	0	0	**108**
10:00 AM	1	57	26	1	6	2	0	0	0	0	0	0	0	**93**
11:00 AM	1	68	21	0	2	1	0	0	0	0	0	0	0	**93**
12:00 PM	1	72	20	0	2	0	0	0	0	0	0	0	0	**95**
1:00 PM	3	77	11	2	4	1	0	0	0	0	0	0	0	**98**
2:00 PM	0	101	24	1	2	2	0	0	0	0	0	0	0	**130**
3:00 PM	0	118	34	2	4	1	0	0	0	0	0	0	0	**159**
4:00 PM	1	148	29	2	5	0	0	0	0	0	0	0	0	**185**
5:00 PM	0	144	38	0	5	1	0	0	0	0	0	0	1	**189**
6:00 PM	4	99	33	0	0	0	0	0	1	0	0	0	0	**137**
7:00 PM	0	60	11	0	3	0	0	0	0	0	0	0	0	**74**
8:00 PM	1	35	6	0	1	0	0	0	0	0	0	0	0	**43**
9:00 PM	0	16	1	0	1	0	0	0	0	0	0	0	0	**18**
10:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**13**	**1,476**	**375**	**11**	**58**	**12**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1,947**
	0.7%	**75.8%**	**19.3%**	**0.6%**	**3.0%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Wednesday, April 9, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	15	5	0	1	0	0	0	0	0	0	0	0	**21**
6:00 AM	0	28	12	1	2	1	0	0	0	0	0	0	0	**44**
7:00 AM	0	91	20	3	4	0	0	0	0	0	0	0	0	**118**
8:00 AM	0	99	20	2	3	0	0	0	0	0	0	0	0	**124**
9:00 AM	1	53	15	2	3	4	0	0	0	0	0	0	0	**78**
10:00 AM	2	72	19	0	4	0	0	0	0	0	0	0	0	**97**
11:00 AM	0	76	22	1	4	1	0	0	0	0	0	0	0	**104**
12:00 PM	1	70	20	1	8	4	0	0	0	0	0	0	0	**104**
1:00 PM	0	67	13	0	2	2	0	0	0	0	0	0	0	**84**
2:00 PM	1	79	24	2	3	1	0	0	0	0	0	0	0	**110**
3:00 PM	1	122	29	0	3	0	0	0	0	0	0	0	0	**155**
4:00 PM	4	124	32	0	7	0	0	0	0	0	0	0	0	**167**
5:00 PM	1	128	34	0	7	0	0	0	1	0	0	0	0	**171**
6:00 PM	2	112	26	0	1	0	0	0	0	0	0	0	0	**141**
7:00 PM	0	112	27	0	4	0	0	0	0	0	0	0	0	**143**
8:00 PM	1	71	16	0	0	0	0	0	0	0	0	0	0	**88**
9:00 PM	0	30	11	0	2	0	0	0	0	0	0	0	0	**43**
10:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
11:00 PM	0	11	6	0	0	0	0	0	0	0	0	0	0	**17**
Total	**14**	**1,381**	**359**	**12**	**58**	**13**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,838**
	0.8%	**75.1%**	**19.5%**	**0.7%**	**3.2%**	**0.7%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Thursday, April 10, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	8	4	0	2	0	0	0	0	0	0	0	0	**14**
5:00 AM	0	23	8	0	1	0	0	0	0	0	0	0	0	**32**
6:00 AM	0	43	15	0	2	0	0	0	0	0	0	0	0	**60**
7:00 AM	0	161	35	3	12	0	0	0	0	0	0	0	0	**211**
8:00 AM	1	108	34	0	3	2	0	0	0	0	0	0	0	**148**
9:00 AM	0	90	25	0	3	0	0	0	0	0	0	0	0	**118**
10:00 AM	1	78	18	1	4	0	0	0	0	0	0	0	0	**102**
11:00 AM	1	89	19	1	3	2	0	0	0	0	0	0	0	**115**
12:00 PM	2	48	18	1	7	0	0	0	0	0	0	0	0	**76**
1:00 PM	2	89	14	0	4	0	0	0	0	0	0	0	0	**109**
2:00 PM	3	85	28	3	5	1	0	0	0	0	0	0	0	**125**
3:00 PM	4	145	23	1	3	0	0	0	1	0	0	0	0	**177**
4:00 PM	1	160	33	3	9	0	0	0	0	0	0	0	0	**206**
5:00 PM	0	165	36	0	4	0	0	0	0	0	0	0	0	**205**
6:00 PM	0	104	22	0	2	0	0	0	0	0	0	0	0	**128**
7:00 PM	1	61	16	1	1	1	0	0	0	0	0	0	0	**81**
8:00 PM	0	36	8	0	2	0	0	0	0	0	0	0	0	**46**
9:00 PM	0	25	5	0	1	0	0	0	0	0	0	0	0	**31**
10:00 PM	0	10	3	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**16**	**1,543**	**364**	**14**	**69**	**6**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2,013**
	0.8%	**76.7%**	**18.1%**	**0.7%**	**3.4%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Thursday, April 10, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	3	4	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	10	10	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	1	42	15	2	1	1	0	0	0	0	0	0	0	**62**
7:00 AM	0	89	11	2	3	1	0	0	0	0	0	0	0	**106**
8:00 AM	0	93	24	2	6	1	0	0	0	0	0	0	0	**126**
9:00 AM	0	61	17	0	8	0	0	0	0	0	0	0	0	**86**
10:00 AM	0	55	19	1	2	2	0	0	0	0	0	0	0	**79**
11:00 AM	2	79	15	1	4	0	0	0	0	0	0	0	0	**101**
12:00 PM	0	72	17	1	5	2	0	0	0	0	0	0	0	**97**
1:00 PM	1	73	16	1	3	3	0	0	0	0	0	0	0	**97**
2:00 PM	2	84	18	2	5	2	0	0	0	0	0	0	0	**113**
3:00 PM	1	110	29	2	4	0	0	0	0	0	0	0	0	**146**
4:00 PM	1	127	30	1	7	2	0	0	1	0	0	0	0	**169**
5:00 PM	0	145	22	0	1	0	0	0	0	0	0	0	0	**168**
6:00 PM	2	123	31	0	6	0	0	0	0	0	0	0	0	**162**
7:00 PM	0	93	24	0	1	0	0	0	0	0	0	0	0	**118**
8:00 PM	0	73	17	0	2	0	0	0	0	0	0	0	0	**92**
9:00 PM	0	43	13	0	0	0	0	0	0	0	0	0	0	**56**
10:00 PM	0	24	4	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	11	3	0	0	0	0	0	0	0	0	0	0	**14**
Total	**10**	**1,416**	**341**	**15**	**58**	**14**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,855**
	0.5%	**76.3%**	**18.4%**	**0.8%**	**3.1%**	**0.8%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Total Study Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	**14**
5:00 AM	0	20	6	0	1	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	44	16	0	4	0	0	0	0	0	0	0	0	**64**
7:00 AM	0	166	45	2	9	0	0	0	0	0	0	0	0	**222**
8:00 AM	1	114	28	0	5	1	0	0	0	0	0	0	0	**149**
9:00 AM	0	83	24	0	3	1	0	0	0	0	0	0	0	**111**
10:00 AM	1	67	20	1	4	1	0	0	0	0	0	0	0	**94**
11:00 AM	1	76	18	0	2	1	0	0	0	0	0	0	0	**98**
12:00 PM	1	56	18	0	5	0	0	0	0	0	0	0	0	**80**
1:00 PM	2	77	12	1	4	0	0	0	0	0	0	0	0	**96**
2:00 PM	1	96	22	2	3	1	0	0	0	0	0	0	0	**125**
3:00 PM	2	135	30	2	3	0	0	0	0	0	0	0	0	**172**
4:00 PM	1	158	30	2	7	0	0	0	0	0	0	0	0	**198**
5:00 PM	0	148	39	0	5	0	0	0	0	0	0	0	0	**192**
6:00 PM	1	96	26	0	2	0	0	0	0	0	0	0	0	**125**
7:00 PM	1	55	13	0	2	0	0	0	0	0	0	0	0	**71**
8:00 PM	0	33	8	0	1	0	0	0	0	0	0	0	0	**42**
9:00 PM	0	19	3	0	1	0	0	0	0	0	0	0	0	**23**
10:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
Total	**12**	**1,473**	**365**	**10**	**62**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,927**
	0.6%	**76.4%**	**18.9%**	**0.5%**	**3.2%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Total Study Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	12	7	0	1	0	0	0	0	0	0	0	0	**20**
6:00 AM	0	36	15	2	2	1	0	0	0	0	0	0	0	**56**
7:00 AM	0	90	16	2	4	0	0	0	0	0	0	0	0	**112**
8:00 AM	0	93	22	2	5	0	0	0	0	0	0	0	0	**122**
9:00 AM	0	58	18	1	5	2	0	0	0	0	0	0	0	**84**
10:00 AM	1	61	17	1	3	1	0	0	0	0	0	0	0	**84**
11:00 AM	1	75	17	1	4	0	0	0	0	0	0	0	0	**98**
12:00 PM	1	67	20	1	6	2	0	0	0	0	0	0	0	**97**
1:00 PM	1	68	17	0	3	2	0	0	0	0	0	0	0	**91**
2:00 PM	1	80	20	2	4	2	0	0	0	0	0	0	0	**109**
3:00 PM	1	119	28	1	4	1	0	0	0	0	0	0	0	**154**
4:00 PM	2	119	30	0	7	1	0	0	0	0	0	0	0	**159**
5:00 PM	1	135	30	0	5	0	0	0	0	0	0	0	0	**171**
6:00 PM	2	112	28	0	3	0	0	0	0	0	0	0	0	**145**
7:00 PM	0	101	26	0	2	0	0	0	0	0	0	0	0	**129**
8:00 PM	0	75	16	0	1	0	0	0	0	0	0	0	0	**92**
9:00 PM	0	35	10	0	1	0	0	0	0	0	0	0	0	**46**
10:00 PM	0	16	4	0	0	0	0	0	0	0	0	0	0	**20**
11:00 PM	0	11	4	0	0	0	0	0	0	0	0	0	0	**15**
Total	**11**	**1,370**	**350**	**13**	**60**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,816**
	0.6%	**75.4%**	**19.3%**	**0.7%**	**3.3%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

TJ Wethington: 720-646-1008
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Vehicle Speed Report Summary

Location: 82nd Ave E/O Yule Way

Direction: Eastbound / Westbound

Date Range: 4/8/2025 to 4/10/2025

Site Code: 05

Direction	Speed Range (mph)																Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Eastbound	0	0	3	2	1	19	135	1,019	2,245	1,620	594	128	26	6	4	1	5	**5,808**
	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	2.3%	17.5%	38.7%	27.9%	10.2%	2.2%	0.4%	0.1%	0.1%	0.0%	0.1%	
Westbound	0	6	2	2	2	16	236	1,280	2,130	1,262	370	99	30	12	3	5	1	**5,456**
	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	4.3%	23.5%	39.0%	23.1%	6.8%	1.8%	0.5%	0.2%	0.1%	0.1%	0.0%	
Total	0	6	5	4	3	35	371	2,299	4,375	2,882	964	227	56	18	7	6	6	**11,264**
	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	3.3%	20.4%	38.8%	25.6%	8.6%	2.0%	0.5%	0.2%	0.1%	0.1%	0.1%	

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	48.9	mph	Mean (Average) Speed	49.3	mph
85th Percentile	54.4	mph	10 mph Pace	43.8 - 53.8	mph
95th Percentile	58.3	mph	Percent in Pace	68.8	%
Westbound			**Westbound**		
50th Percentile (Median)	47.8	mph	Mean (Average) Speed	48.2	mph
85th Percentile	53.2	mph	10 mph Pace	42.7 - 52.7	mph
95th Percentile	57.6	mph	Percent in Pace	69.2	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Tuesday, April 8, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	0	0	0	0	1	8	2	1	1	0	0	0	0	0	**13**
5:00 AM	0	0	0	0	0	0	0	3	6	6	3	3	0	0	0	0	0	**21**
6:00 AM	0	0	0	0	0	0	0	10	28	19	7	2	0	0	0	0	0	**66**
7:00 AM	0	0	0	0	0	0	1	48	98	48	23	4	1	0	0	0	0	**223**
8:00 AM	0	0	0	0	0	0	3	27	45	42	16	6	1	0	0	1	0	**141**
9:00 AM	0	0	0	0	0	0	5	21	42	30	11	0	1	0	0	0	0	**110**
10:00 AM	0	0	0	0	0	0	2	15	39	17	9	1	0	0	0	0	0	**83**
11:00 AM	0	0	0	0	0	0	3	16	34	26	6	2	0	0	0	0	0	**87**
12:00 PM	0	0	0	0	0	0	4	16	24	15	8	4	0	1	0	0	0	**72**
1:00 PM	0	0	0	0	0	1	6	18	30	15	9	0	0	0	0	0	0	**79**
2:00 PM	0	0	0	0	0	0	4	23	56	22	11	3	2	0	0	0	0	**121**
3:00 PM	0	0	0	1	0	3	4	39	75	47	12	3	0	0	1	0	0	**185**
4:00 PM	0	0	0	0	0	1	6	30	77	73	15	4	1	0	0	0	0	**207**
5:00 PM	0	0	0	0	0	0	3	30	65	51	28	4	1	0	0	0	1	**183**
6:00 PM	0	0	0	0	0	0	0	13	52	37	10	1	1	0	0	0	0	**114**
7:00 PM	0	0	0	0	0	1	1	7	19	20	10	2	0	0	0	0	0	**60**
8:00 PM	0	0	0	0	0	0	1	8	13	11	3	1	0	0	0	0	0	**37**
9:00 PM	0	0	0	0	0	0	1	1	8	8	1	0	0	0	0	0	0	**19**
10:00 PM	0	0	0	0	0	0	0	0	4	1	1	0	0	1	0	0	0	**7**
11:00 PM	0	0	0	0	0	0	0	3	2	2	2	1	0	0	0	0	0	**10**
Total	**0**	**0**	**0**	**1**	**0**	**6**	**44**	**329**	**728**	**497**	**187**	**42**	**9**	**2**	**1**	**1**	**1**	**1,848**
	0.0%	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.3%**	**2.4%**	**17.8%**	**39.4%**	**26.9%**	**10.1%**	**2.3%**	**0.5%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	48.8	mph	Mean (Average) Speed	49.2	mph
85th Percentile	54.4	mph	10 mph Pace	44.0 - 54.0	mph
95th Percentile	58.6	mph	Percent in Pace	69.0	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Tuesday, April 8, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	3	1	2	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	**5**
5:00 AM	0	0	0	0	0	0	0	1	8	6	1	1	0	0	0	0	0	**17**
6:00 AM	0	0	0	0	0	0	2	11	19	21	4	2	1	0	0	0	0	**60**
7:00 AM	0	0	0	0	0	0	0	25	47	33	9	0	1	0	0	0	0	**115**
8:00 AM	0	0	0	0	0	0	3	22	50	32	9	2	0	0	0	0	0	**118**
9:00 AM	0	0	0	0	0	1	2	20	32	27	6	0	1	0	0	0	0	**89**
10:00 AM	0	0	0	0	0	0	3	21	27	17	2	2	0	0	0	0	0	**72**
11:00 AM	0	0	0	0	0	1	6	16	31	26	7	1	0	0	0	0	0	**88**
12:00 PM	0	0	1	0	0	1	5	20	37	16	9	0	0	0	0	0	0	**89**
1:00 PM	0	1	0	0	0	4	3	27	34	16	6	1	0	0	0	0	0	**92**
2:00 PM	0	1	0	0	0	0	7	28	43	21	3	1	1	0	0	0	0	**105**
3:00 PM	0	1	0	0	0	0	6	52	63	31	6	2	1	0	0	0	0	**162**
4:00 PM	0	0	0	0	0	2	8	38	56	27	8	0	1	0	0	0	0	**140**
5:00 PM	0	0	0	0	0	0	4	42	86	31	8	4	0	0	0	0	0	**175**
6:00 PM	0	0	0	0	0	0	7	36	51	30	7	1	1	0	0	0	0	**133**
7:00 PM	0	0	0	0	0	1	5	26	52	27	11	1	0	2	0	0	1	**126**
8:00 PM	0	0	0	0	0	2	7	35	36	12	2	2	0	0	0	0	0	**96**
9:00 PM	0	0	0	0	0	0	3	8	17	8	5	1	0	0	0	0	0	**42**
10:00 PM	0	0	0	0	0	0	0	3	3	3	2	1	1	1	0	0	0	**14**
11:00 PM	0	0	0	0	0	0	2	3	3	4	2	1	0	0	0	0	0	**15**
Total	**0**	**3**	**1**	**0**	**0**	**12**	**73**	**434**	**701**	**392**	**112**	**23**	**8**	**3**	**0**	**0**	**1**	**1,763**
	0.0%	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.7%**	**4.1%**	**24.6%**	**39.8%**	**22.2%**	**6.4%**	**1.3%**	**0.5%**	**0.2%**	**0.0%**	**0.0%**	**0.1%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	47.6	mph	Mean (Average) Speed	47.8	mph
85th Percentile	52.8	mph	10 mph Pace	42.5 - 52.5	mph
95th Percentile	56.7	mph	Percent in Pace	71.41	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Wednesday, April 9, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	0	0	0	0	2	6	5	4	0	0	0	0	0	0	**17**
5:00 AM	0	0	0	0	0	0	1	3	9	9	2	2	2	0	0	0	0	**28**
6:00 AM	0	0	0	0	0	0	0	15	20	23	8	3	0	0	0	0	0	**69**
7:00 AM	0	0	0	0	0	3	2	36	105	57	21	6	0	0	0	0	0	**230**
8:00 AM	0	0	0	0	0	0	2	23	63	42	18	7	2	1	0	0	0	**158**
9:00 AM	0	0	0	0	0	0	2	24	45	29	6	2	0	0	0	0	0	**108**
10:00 AM	0	0	0	0	0	1	2	22	45	16	3	4	0	0	0	0	0	**93**
11:00 AM	0	0	0	1	0	0	3	14	23	35	11	4	2	0	0	0	0	**93**
12:00 PM	0	0	0	0	0	0	0	9	44	32	7	2	1	0	0	0	0	**95**
1:00 PM	0	0	0	0	1	2	7	17	40	17	12	2	0	0	0	0	0	**98**
2:00 PM	0	0	0	0	0	0	4	36	46	28	14	1	0	1	0	0	0	**130**
3:00 PM	0	0	0	0	0	0	4	17	62	56	16	4	0	0	0	0	0	**159**
4:00 PM	0	0	0	0	0	0	1	24	83	54	16	6	1	0	0	0	0	**185**
5:00 PM	0	0	0	0	0	0	4	29	57	69	28	2	0	0	0	0	0	**189**
6:00 PM	0	0	0	0	0	0	1	18	37	59	17	4	0	0	0	0	1	**137**
7:00 PM	0	0	0	0	0	1	1	12	28	22	6	3	1	0	0	0	0	**74**
8:00 PM	0	0	0	0	0	0	2	2	20	14	3	1	0	0	1	0	0	**43**
9:00 PM	0	0	0	0	0	0	4	6	5	0	1	2	0	0	0	0	0	**18**
10:00 PM	0	0	0	0	0	0	1	0	6	4	0	0	0	0	0	0	1	**12**
11:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	**2**
Total	**0**	**0**	**0**	**1**	**1**	**7**	**41**	**309**	**747**	**577**	**194**	**55**	**9**	**2**	**1**	**0**	**3**	**1,947**
	0.0%	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.4%**	**2.1%**	**15.9%**	**38.4%**	**29.6%**	**10.0%**	**2.8%**	**0.5%**	**0.1%**	**0.1%**	**0.0%**	**0.2%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	49.1	mph	Mean (Average) Speed	49.5	mph
85th Percentile	54.6	mph	10 mph Pace	44.2 - 54.2	mph
95th Percentile	58.8	mph	Percent in Pace	68.8	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Wednesday, April 9, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	**5**
5:00 AM	0	0	0	0	0	0	0	2	7	8	2	2	0	0	0	0	0	**21**
6:00 AM	0	0	0	0	0	1	2	7	15	14	3	2	0	0	0	0	0	**44**
7:00 AM	0	0	0	0	0	0	0	20	34	39	20	2	3	0	0	0	0	**118**
8:00 AM	0	0	0	0	0	0	0	25	49	45	5	0	0	0	0	0	0	**124**
9:00 AM	0	0	1	0	0	0	2	18	32	20	4	1	0	0	0	0	0	**78**
10:00 AM	0	2	0	0	0	0	9	32	40	10	2	1	0	1	0	0	0	**97**
11:00 AM	0	0	0	0	0	0	4	27	32	28	9	2	1	1	0	0	0	**104**
12:00 PM	0	0	0	0	0	0	8	28	43	20	3	2	0	0	0	0	0	**104**
1:00 PM	0	0	0	0	0	1	3	31	22	20	4	2	1	0	0	0	0	**84**
2:00 PM	0	0	0	0	0	0	6	38	41	15	8	1	1	0	0	0	0	**110**
3:00 PM	0	0	0	0	0	0	2	51	68	26	5	1	0	0	0	2	0	**155**
4:00 PM	0	0	0	0	0	0	4	44	70	30	14	3	2	0	0	0	0	**167**
5:00 PM	0	0	0	0	0	1	6	27	75	44	12	4	1	1	0	0	0	**171**
6:00 PM	0	0	0	0	0	0	8	27	41	49	11	3	2	0	0	0	0	**141**
7:00 PM	0	0	0	0	0	0	5	35	60	29	10	2	2	0	0	0	0	**143**
8:00 PM	0	0	0	0	0	0	7	20	41	15	5	0	0	0	0	0	0	**88**
9:00 PM	0	0	0	0	0	0	5	9	16	10	0	2	0	0	0	1	0	**43**
10:00 PM	0	0	0	0	0	0	0	8	6	2	3	0	0	0	0	0	0	**19**
11:00 PM	0	0	0	0	0	0	1	4	3	3	2	2	1	1	0	0	0	**17**
Total	**0**	**2**	**1**	**0**	**0**	**3**	**72**	**453**	**700**	**428**	**123**	**34**	**14**	**5**	**0**	**3**	**0**	**1,838**
	0.0%	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.2%**	**3.9%**	**24.6%**	**38.1%**	**23.3%**	**6.7%**	**1.8%**	**0.8%**	**0.3%**	**0.0%**	**0.2%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	47.6	mph	Mean (Average) Speed	48.2	mph
85th Percentile	53.4	mph	10 mph Pace	42.2 - 52.2	mph
95th Percentile	57.7	mph	Percent in Pace	69.31	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Thursday, April 10, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	0	0	0	0	1	7	2	2	2	0	0	0	0	0	**14**
5:00 AM	0	0	0	0	0	0	1	3	9	12	4	2	0	0	1	0	0	**32**
6:00 AM	0	0	0	0	0	0	0	8	22	20	8	1	1	0	0	0	0	**60**
7:00 AM	0	0	0	0	0	0	1	29	87	68	23	2	0	1	0	0	0	**211**
8:00 AM	0	0	0	0	0	0	0	21	57	47	21	2	0	0	0	0	0	**148**
9:00 AM	0	0	0	0	0	2	2	22	47	30	13	2	0	0	0	0	0	**118**
10:00 AM	0	0	1	0	0	0	3	31	35	22	9	1	0	0	0	0	0	**102**
11:00 AM	0	0	0	0	0	0	6	24	50	24	9	1	0	1	0	0	0	**115**
12:00 PM	0	0	0	0	0	1	5	14	29	14	13	0	0	0	0	0	0	**76**
1:00 PM	0	0	1	0	0	1	6	23	46	23	7	1	0	0	0	0	1	**109**
2:00 PM	0	0	0	0	0	2	9	36	51	22	5	0	0	0	0	0	0	**125**
3:00 PM	0	0	1	0	0	0	3	37	64	51	15	5	1	0	0	0	0	**177**
4:00 PM	0	0	0	0	0	0	7	32	84	60	23	0	0	0	0	0	0	**206**
5:00 PM	0	0	0	0	0	0	3	39	79	63	16	4	1	0	0	0	0	**205**
6:00 PM	0	0	0	0	0	0	1	18	49	32	22	2	4	0	0	0	0	**128**
7:00 PM	0	0	0	0	0	0	2	19	23	25	9	2	1	0	0	0	0	**81**
8:00 PM	0	0	0	0	0	0	0	10	15	14	6	1	0	0	0	0	0	**46**
9:00 PM	0	0	0	0	0	0	1	7	8	10	4	1	0	0	0	0	0	**31**
10:00 PM	0	0	0	0	0	0	0	2	2	5	2	1	0	0	1	0	0	**13**
11:00 PM	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	0	0	**5**
Total	**0**	**0**	**3**	**0**	**0**	**6**	**50**	**381**	**770**	**546**	**213**	**31**	**8**	**2**	**2**	**0**	**1**	**2,013**
	0.0%	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.3%**	**2.5%**	**18.9%**	**38.3%**	**27.1%**	**10.6%**	**1.5%**	**0.4%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	48.8	mph	Mean (Average) Speed	49.0	mph
85th Percentile	54.1	mph	10 mph Pace	43.1 - 53.1	mph
95th Percentile	57.8	mph	Percent in Pace	68.9	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Thursday, April 10, 2025
Westbound

Time	Speed Range (mph)																Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	**7**
5:00 AM	0	0	0	0	0	0	1	2	3	7	5	2	0	0	0	0	0	**20**
6:00 AM	0	0	0	0	0	0	1	5	26	16	12	2	0	0	0	0	0	**62**
7:00 AM	0	0	0	0	0	0	1	19	37	33	16	0	0	0	0	0	0	**106**
8:00 AM	0	0	0	0	0	0	3	20	54	40	7	2	0	0	0	0	0	**126**
9:00 AM	0	0	0	0	0	0	2	20	39	19	5	1	0	0	0	0	0	**86**
10:00 AM	0	0	0	0	0	0	6	22	25	19	5	1	1	0	0	0	0	**79**
11:00 AM	0	1	0	0	1	0	3	20	39	26	7	3	0	0	0	1	0	**101**
12:00 PM	0	0	0	0	0	0	8	30	37	13	4	5	0	0	0	0	0	**97**
1:00 PM	0	0	0	0	0	0	9	19	39	19	8	2	1	0	0	0	0	**97**
2:00 PM	0	0	0	0	0	0	15	30	44	16	6	1	0	0	1	0	0	**113**
3:00 PM	0	0	0	0	0	0	5	40	54	30	13	4	0	0	0	0	0	**146**
4:00 PM	0	0	0	0	1	0	6	29	73	43	12	3	1	1	0	0	0	**169**
5:00 PM	0	0	0	0	0	0	5	32	70	50	6	3	2	0	0	0	0	**168**
6:00 PM	0	0	0	2	0	0	7	28	60	51	11	1	1	1	0	0	0	**162**
7:00 PM	0	0	0	0	0	0	13	24	43	26	9	1	0	0	2	0	0	**118**
8:00 PM	0	0	0	0	0	0	1	32	42	10	1	4	2	0	0	0	0	**92**
9:00 PM	0	0	0	0	0	1	2	12	25	8	4	3	0	0	0	1	0	**56**
10:00 PM	0	0	0	0	0	0	2	8	9	5	1	1	0	2	0	0	0	**28**
11:00 PM	0	0	0	0	0	0	0	0	5	6	1	2	0	0	0	0	0	**14**
Total	**0**	**1**	**0**	**2**	**2**	**1**	**91**	**393**	**729**	**442**	**135**	**42**	**8**	**4**	**3**	**2**	**0**	**1,855**
	0.0%	**0.1%**	**0.0%**	**0.1%**	**0.1%**	**0.1%**	**4.9%**	**21.2%**	**39.3%**	**23.8%**	**7.3%**	**2.3%**	**0.4%**	**0.2%**	**0.2%**	**0.1%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	48.1	mph	Mean (Average) Speed	48.4	mph
85th Percentile	53.6	mph	10 mph Pace	43.3 - 53.3	mph
95th Percentile	58.2	mph	Percent in Pace	68.14	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Total Study Average
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	0	0	0	0	1	7	3	2	1	0	0	0	0	0	**14**
5:00 AM	0	0	0	0	0	0	1	3	8	9	3	2	1	0	0	0	0	**27**
6:00 AM	0	0	0	0	0	0	0	11	23	21	8	2	0	0	0	0	0	**65**
7:00 AM	0	0	0	0	0	1	1	38	97	58	22	4	0	0	0	0	0	**221**
8:00 AM	0	0	0	0	0	0	2	24	55	44	18	5	1	0	0	0	0	**149**
9:00 AM	0	0	0	0	0	1	3	22	45	30	10	1	0	0	0	0	0	**112**
10:00 AM	0	0	0	0	0	0	2	23	40	18	7	2	0	0	0	0	0	**92**
11:00 AM	0	0	0	0	0	0	4	18	36	28	9	2	1	0	0	0	0	**98**
12:00 PM	0	0	0	0	0	0	3	13	32	20	9	2	0	0	0	0	0	**79**
1:00 PM	0	0	0	0	0	1	6	19	39	18	9	1	0	0	0	0	0	**93**
2:00 PM	0	0	0	0	0	1	6	32	51	24	10	1	1	0	0	0	0	**126**
3:00 PM	0	0	0	0	0	1	4	31	67	51	14	4	0	0	0	0	0	**172**
4:00 PM	0	0	0	0	0	0	5	29	81	62	18	3	1	0	0	0	0	**199**
5:00 PM	0	0	0	0	0	0	3	33	67	61	24	3	1	0	0	0	0	**192**
6:00 PM	0	0	0	0	0	0	1	16	46	43	16	2	2	0	0	0	0	**126**
7:00 PM	0	0	0	0	0	1	1	13	23	22	8	2	1	0	0	0	0	**71**
8:00 PM	0	0	0	0	0	0	1	7	16	13	4	1	0	0	0	0	0	**42**
9:00 PM	0	0	0	0	0	0	2	5	7	6	2	1	0	0	0	0	0	**23**
10:00 PM	0	0	0	0	0	0	0	1	4	3	1	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	**6**
Total	**0**	**0**	**0**	**0**	**0**	**6**	**45**	**341**	**749**	**540**	**196**	**40**	**9**	**0**	**0**	**0**	**0**	**1,926**
	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	**2.3%**	**17.7%**	**38.9%**	**28.0%**	**10.2%**	**2.1%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	48.9	mph	Mean (Average) Speed	49.3	mph
85th Percentile	54.4	mph	10 mph Pace	43.8 - 53.8	mph
95th Percentile	58.3	mph	Percent in Pace	68.8	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 to 4/10/2025
Site Code: 05

Total Study Average
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	**6**
5:00 AM	0	0	0	0	0	0	0	2	6	7	3	2	0	0	0	0	0	**20**
6:00 AM	0	0	0	0	0	0	2	8	20	17	6	2	0	0	0	0	0	**55**
7:00 AM	0	0	0	0	0	0	0	21	39	35	15	1	1	0	0	0	0	**112**
8:00 AM	0	0	0	0	0	0	2	22	51	39	7	1	0	0	0	0	0	**122**
9:00 AM	0	0	0	0	0	0	2	19	34	22	5	1	0	0	0	0	0	**83**
10:00 AM	0	1	0	0	0	0	6	25	31	15	3	1	0	0	0	0	0	**82**
11:00 AM	0	0	0	0	0	0	4	21	34	27	8	2	0	0	0	0	0	**96**
12:00 PM	0	0	0	0	0	0	7	26	39	16	5	2	0	0	0	0	0	**95**
1:00 PM	0	0	0	0	0	2	5	26	32	18	6	2	1	0	0	0	0	**92**
2:00 PM	0	0	0	0	0	0	9	32	43	17	6	1	1	0	0	0	0	**109**
3:00 PM	0	0	0	0	0	0	4	48	62	29	8	2	0	0	0	1	0	**154**
4:00 PM	0	0	0	0	0	1	6	37	66	33	11	2	1	0	0	0	0	**157**
5:00 PM	0	0	0	0	0	0	5	34	77	42	9	4	1	0	0	0	0	**172**
6:00 PM	0	0	0	1	0	0	7	30	51	43	10	2	1	0	0	0	0	**145**
7:00 PM	0	0	0	0	0	0	8	28	52	27	10	1	1	1	1	0	0	**129**
8:00 PM	0	0	0	0	0	1	5	29	40	12	3	2	1	0	0	0	0	**93**
9:00 PM	0	0	0	0	0	0	3	10	19	9	3	2	0	0	0	1	0	**47**
10:00 PM	0	0	0	0	0	0	1	6	6	3	2	1	0	1	0	0	0	**20**
11:00 PM	0	0	0	0	0	0	1	2	4	4	2	2	0	0	0	0	0	**15**
Total	**0**	**1**	**0**	**1**	**0**	**4**	**77**	**426**	**711**	**418**	**125**	**34**	**8**	**2**	**1**	**2**	**0**	**1,810**
	0.0%	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.2%**	**4.3%**	**23.5%**	**39.3%**	**23.1%**	**6.9%**	**1.9%**	**0.4%**	**0.1%**	**0.1%**	**0.1%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	47.8	mph	Mean (Average) Speed	48.2	mph
85th Percentile	53.2	mph	10 mph Pace	42.7 - 52.7	mph
95th Percentile	57.6	mph	Percent in Pace	69.2	%

TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Location: 82nd Ave E/O Yule Way
Date Range: 4/8/2025 - 4/14/2025
Site Code: 05

Time	Tuesday 4/8/2025			Wednesday 4/9/2025			Thursday 4/10/2025			Friday 4/11/2025			Saturday 4/12/2025			Sunday 4/13/2025			Monday 4/14/2025			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	3	6	9	2	3	5	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3	4	7
1:00 AM	0	1	1	1	1	2	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	0	1	2
2:00 AM	2	2	4	1	0	1	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2
3:00 AM	5	1	6	5	1	6	5	2	7	-	-	-	-	-	-	-	-	-	-	-	-	5	1	6
4:00 AM	13	5	18	17	5	22	14	7	21	-	-	-	-	-	-	-	-	-	-	-	-	15	6	20
5:00 AM	21	17	38	28	21	49	32	20	52	-	-	-	-	-	-	-	-	-	-	-	-	27	19	46
6:00 AM	66	60	126	69	44	113	60	62	122	-	-	-	-	-	-	-	-	-	-	-	-	65	55	120
7:00 AM	**223**	115	**338**	**230**	118	**348**	**211**	106	**317**	-	-	-	-	-	-	-	-	-	-	-	-	**221**	113	**334**
8:00 AM	141	**118**	259	158	**124**	282	148	**126**	274	-	-	-	-	-	-	-	-	-	-	-	-	149	**123**	272
9:00 AM	110	89	199	108	78	186	118	86	204	-	-	-	-	-	-	-	-	-	-	-	-	112	84	196
10:00 AM	83	72	155	93	97	190	102	79	181	-	-	-	-	-	-	-	-	-	-	-	-	93	83	175
11:00 AM	87	88	175	93	104	197	115	101	216	-	-	-	-	-	-	-	-	-	-	-	-	98	98	196
12:00 PM	72	89	161	95	104	199	76	97	173	-	-	-	-	-	-	-	-	-	-	-	-	81	97	178
1:00 PM	79	92	171	98	84	182	109	97	206	-	-	-	-	-	-	-	-	-	-	-	-	95	91	186
2:00 PM	121	105	226	130	110	240	125	113	238	-	-	-	-	-	-	-	-	-	-	-	-	125	109	235
3:00 PM	185	162	347	159	155	314	177	146	323	-	-	-	-	-	-	-	-	-	-	-	-	174	154	328
4:00 PM	**207**	140	347	185	167	352	**206**	**169**	**375**	-	-	-	-	-	-	-	-	-	-	-	-	**199**	159	358
5:00 PM	183	**175**	**358**	**189**	**171**	**360**	205	168	373	-	-	-	-	-	-	-	-	-	-	-	-	192	**171**	**364**
6:00 PM	114	133	247	137	141	278	128	162	290	-	-	-	-	-	-	-	-	-	-	-	-	126	145	272
7:00 PM	60	126	186	74	143	217	81	118	199	-	-	-	-	-	-	-	-	-	-	-	-	72	129	201
8:00 PM	37	96	133	43	88	131	46	92	138	-	-	-	-	-	-	-	-	-	-	-	-	42	92	134
9:00 PM	19	42	61	18	43	61	31	56	87	-	-	-	-	-	-	-	-	-	-	-	-	23	47	70
10:00 PM	7	14	21	12	19	31	13	28	41	-	-	-	-	-	-	-	-	-	-	-	-	11	20	31
11:00 PM	10	15	25	2	17	19	5	14	19	-	-	-	-	-	-	-	-	-	-	-	-	6	15	21
Total	**1,848**	**1,763**	**3,611**	**1,947**	**1,838**	**3,785**	**2,013**	**1,855**	**3,868**	-	-	-	-	-	-	-	-	-	-	-	-	**1,936**	**1,819**	**3,755**
Percent	**51%**	**49%**		**51%**	**49%**		**52%**	**48%**		-	-		-	-		-	-		-	-		**52%**	**48%**	
AM Peak	07:00	08:00	07:00	07:00	08:00	07:00	07:00	08:00	07:00	-	-	-	-	-	-	-	-	-	-	-	-	07:00	08:00	07:00
Vol.	223	118	338	230	124	348	211	126	317	-	-	-	-	-	-	-	-	-	-	-	-	221	123	334
PM Peak	16:00	17:00	17:00	17:00	17:00	17:00	16:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	16:00	17:00	17:00
Vol.	207	175	358	189	171	360	206	169	375	-	-	-	-	-	-	-	-	-	-	-	-	199	171	364

1. Mid-week average includes data between Tuesday and Thursday.

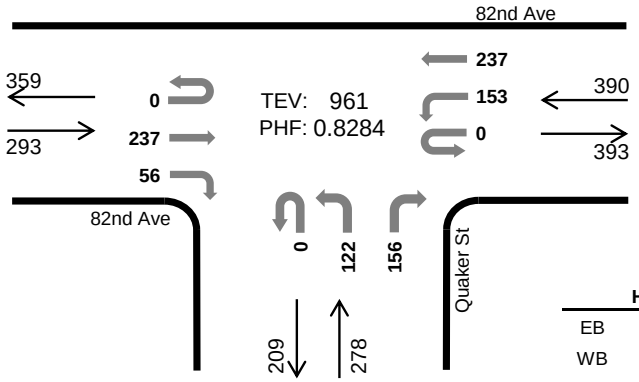
TJ Wethington: 720-646-1008
tj.wethington@idaxdata.com

Quaker St
82nd Ave

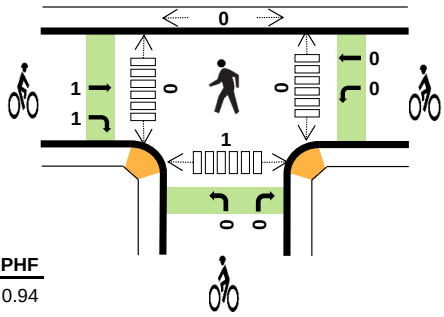
N

Peak Hour

Date: 4/8/2025
Count Period: 7:00 AM to 7:00 PM
Peak Hour: 3:15 PM to 4:15 PM



	HV%	PHF
EB	4%	0.94
WB	2%	0.77
NB	3%	0.81
SB	--	--
TOTAL	3%	0.83



Peak Hour Count Summaries

Peak Hour Interval Start		82nd Ave Eastbound				82nd Ave Westbound				Quaker St Northbound				n/a Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:15 PM		0	0	58	14	0	26	56	0	0	31	0	43	0	0	0	0	228	0
3:30 PM		0	0	61	10	0	45	60	0	0	23	0	27	0	0	0	0	226	0
3:45 PM		0	0	63	15	0	51	75	0	0	40	0	46	0	0	0	0	290	0
4:00 PM		0	0	55	17	0	31	46	0	0	28	0	40	0	0	0	0	217	961
Pk Hr	All	0	0	237	56	0	153	237	0	0	122	0	156	0	0	0	0	961	
	HV	0	0	10	1	0	3	4	0	0	5	0	4	0	0	0	0	27	
	HV%	-	-	4%	2%	-	2%	2%	-	-	4%	-	3%	-	-	-	-	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:15 PM	5	1	1	0	*7*	1	0	0	0	*1*	0	0	0	0	*0*
3:30 PM	2	1	4	0	*7*	1	0	0	0	*1*	0	0	0	0	*0*
3:45 PM	0	3	4	0	*7*	0	0	0	0	*0*	0	0	0	1	*1*
4:00 PM	4	2	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	11	7	9	0	*27*	2	0	0	0	*2*	0	0	0	1	*1*

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Count Summaries - All Vehicles

Interval Start	82nd Ave				82nd Ave				Quaker St				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	58	19	0	19	18	0	0	5	0	28	0	0	0	0	147	0
7:15 AM	0	0	127	36	0	16	11	0	0	7	0	41	0	0	0	0	238	0
7:30 AM	0	0	108	40	0	34	26	0	0	4	0	24	0	0	0	0	236	0
7:45 AM	0	0	46	29	0	47	55	0	0	14	0	36	0	0	0	0	227	848
8:00 AM	0	0	51	33	0	27	34	0	0	21	0	39	0	0	0	0	205	906
8:15 AM	0	0	56	22	0	32	35	0	0	14	0	32	0	0	0	0	191	859
8:30 AM	0	0	41	17	0	20	33	0	0	14	0	30	0	0	0	0	155	778
8:45 AM	0	0	53	19	0	22	34	0	0	13	0	24	0	0	0	0	165	716
9:00 AM	0	0	37	8	0	16	23	0	0	10	0	21	0	0	0	0	115	626
9:15 AM	0	0	29	8	0	16	24	0	0	11	0	17	0	0	0	0	105	540
9:30 AM	0	0	58	12	0	12	17	0	0	7	0	38	0	0	0	0	144	529
9:45 AM	0	0	52	13	0	31	33	0	0	10	0	22	0	0	0	0	161	525
10:00 AM	0	0	30	10	0	17	21	0	0	9	0	11	0	0	0	0	98	508
10:15 AM	0	0	25	7	0	14	19	0	0	7	0	13	0	0	0	0	85	488
10:30 AM	0	0	28	8	0	14	27	0	0	4	0	10	0	0	0	0	91	435
10:45 AM	0	0	32	7	0	19	26	0	0	10	0	16	0	0	0	0	110	384
11:00 AM	0	0	29	7	0	22	28	0	0	10	0	24	0	0	0	0	120	406
11:15 AM	0	0	48	6	0	18	31	0	0	13	0	30	0	0	0	0	146	467
11:30 AM	0	0	36	11	0	34	32	0	0	9	0	29	0	0	0	0	151	527
11:45 AM	0	0	35	5	0	30	23	0	0	13	0	19	0	0	0	0	125	542
12:00 PM	0	0	32	10	0	17	36	0	0	7	0	28	0	0	0	0	130	552
12:15 PM	0	0	22	11	0	20	34	0	0	12	0	26	0	0	0	0	125	531
12:30 PM	0	0	31	6	0	14	36	0	0	10	0	15	0	0	0	0	112	492
12:45 PM	0	0	28	11	0	10	37	0	0	11	0	20	0	0	0	0	117	484
1:00 PM	0	0	32	8	0	12	31	0	0	6	0	19	0	0	0	0	108	462
1:15 PM	0	0	36	8	0	29	57	0	0	10	0	23	0	0	0	0	163	500
1:30 PM	0	0	23	11	0	28	31	0	0	10	0	32	0	0	0	0	135	523
1:45 PM	0	0	38	6	0	21	28	0	0	11	0	24	0	0	0	0	128	534
2:00 PM	0	0	41	13	0	29	40	0	0	10	0	25	0	0	0	0	158	584
2:15 PM	0	0	45	6	0	15	29	0	0	10	0	27	0	0	0	0	132	553
2:30 PM	0	0	40	6	0	20	40	0	0	11	0	32	0	0	0	0	149	567
2:45 PM	0	0	45	16	0	36	44	0	0	13	0	22	0	0	0	0	176	615
3:00 PM	0	0	58	16	0	38	41	0	0	11	0	20	0	0	0	0	184	641
3:15 PM	**0**	**0**	**58**	**14**	**0**	**26**	**56**	**0**	**0**	**31**	**0**	**43**	**0**	**0**	**0**	**0**	**228**	**737**
3:30 PM	**0**	**0**	**61**	**10**	**0**	**45**	**60**	**0**	**0**	**23**	**0**	**27**	**0**	**0**	**0**	**0**	**226**	**814**
3:45 PM	**0**	**0**	**63**	**15**	**0**	**51**	**75**	**0**	**0**	**40**	**0**	**46**	**0**	**0**	**0**	**0**	**290**	**928**
4:00 PM	**0**	**0**	**55**	**17**	**0**	**31**	**46**	**0**	**0**	**28**	**0**	**40**	**0**	**0**	**0**	**0**	**217**	**961**
4:15 PM	0	0	55	18	0	25	51	0	0	24	0	36	0	0	0	0	209	942
4:30 PM	0	0	68	24	0	40	46	0	0	19	0	31	0	0	0	0	228	944
4:45 PM	0	0	61	20	0	33	49	0	0	24	0	41	0	0	0	0	228	882
5:00 PM	0	0	45	24	0	35	72	0	0	33	0	34	0	0	0	0	243	908
5:15 PM	0	0	66	23	0	21	61	0	0	25	0	37	0	0	0	0	233	932
5:30 PM	0	0	58	10	0	31	66	0	0	31	0	42	0	0	0	0	238	942
5:45 PM	0	0	50	25	0	28	73	0	0	26	0	34	0	0	0	0	236	950
6:00 PM	0	0	39	21	0	19	60	0	0	18	0	21	0	0	0	0	178	885
6:15 PM	0	0	24	16	0	34	56	0	0	20	0	16	0	0	0	0	166	818
6:30 PM	0	0	34	9	0	21	59	0	0	6	0	15	0	0	0	0	144	724
6:45 PM	0	0	39	7	0	21	54	0	0	15	0	24	0	0	0	0	160	648
Count Total	0	0	2,226	698	0	1,210	1,918	0	0	700	0	1,304	0	0	0	0	8,056	
Pk Hr All	**0**	**0**	**237**	**56**	**0**	**153**	**237**	**0**	**0**	**122**	**0**	**156**	**0**	**0**	**0**	**0**	**961**	
Pk Hr HV	**0**	**0**	**10**	**1**	**0**	**3**	**4**	**0**	**0**	**5**	**0**	**4**	**0**	**0**	**0**	**0**	**27**	
Pk Hr HV%	**-**	**-**	**4%**	**2%**	**-**	**2%**	**2%**	**-**	**-**	**4%**	**-**	**3%**	**-**	**-**	**-**	**-**	**3%**	

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Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	3	3	1	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	1	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	4	4	2	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	2	0	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	1	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
9:00 AM	0	1	2	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
9:15 AM	1	1	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
9:30 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
9:45 AM	1	2	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
10:00 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
10:15 AM	1	0	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
10:30 AM	0	3	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
10:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
11:00 AM	0	1	1	0	*2*	0	0	1	0	*1*	0	0	0	0	*0*
11:15 AM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	0	1	2	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	1	2	2	0	*5*	0	1	0	0	*1*	0	0	0	0	*0*
12:00 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	0	2	0	0	*2*	0	0	1	0	*1*	0	0	0	0	*0*
12:30 PM	0	1	0	0	*1*	2	0	0	0	*2*	0	0	0	0	*0*
12:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	1	*1*
1:15 PM	2	2	0	0	*4*	0	0	1	0	*1*	0	0	0	0	*0*
1:30 PM	1	2	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
1:45 PM	0	1	1	0	*2*	0	2	1	0	*3*	0	0	0	0	*0*
2:00 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	0	1	0	0	*1*	1	0	0	0	*1*	0	0	0	1	*1*
2:30 PM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
2:45 PM	1	2	0	0	*3*	0	0	2	0	*2*	0	0	0	0	*0*
3:00 PM	2	0	0	0	*2*	1	0	2	0	*3*	0	0	0	1	*1*
3:15 PM	**5**	**1**	**1**	**0**	**7**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
3:30 PM	**2**	**1**	**4**	**0**	**7**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
3:45 PM	**0**	**3**	**4**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
4:00 PM	**4**	**2**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	1	1	2	0	*4*	0	1	1	0	*2*	0	0	0	0	*0*
4:30 PM	1	0	1	0	*2*	1	0	0	0	*1*	0	0	0	0	*0*
4:45 PM	0	0	0	0	*0*	0	1	0	0	*1*	0	0	0	0	*0*
5:00 PM	1	0	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
6:00 PM	1	0	0	0	*1*	0	1	0	0	*1*	0	0	0	0	*0*
6:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
6:30 PM	1	1	1	0	*3*	0	0	0	0	*0*	0	0	0	1	*1*
6:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	47	50	34	0	*131*	7	6	9	0	*22*	0	0	0	6	*6*
Peak Hour	**11**	**7**	**9**	**0**	***27***	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**1**	**1**

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Count Summaries - Heavy Vehicles

Interval Start	82nd Ave				82nd Ave				Quaker St				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	1	0	0	3	0	0	0	0	1	0	0	0	0	7	0
7:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0
7:45 AM	0	0	2	2	0	2	2	0	0	0	0	2	0	0	0	0	10	21
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	16
8:15 AM	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	3	17
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	17
8:45 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	9
9:00 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	3	10
9:15 AM	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	10
9:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	10
9:45 AM	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	11
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	9
10:15 AM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	8
10:30 AM	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	0	4	10
10:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
11:00 AM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	9
11:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
11:30 AM	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	3	8
11:45 AM	0	0	1	0	0	0	2	0	0	1	0	1	0	0	0	0	5	12
12:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	13
12:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	13
12:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	11
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
1:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
1:15 PM	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	4	6
1:30 PM	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0	4	9
1:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	11
2:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	12
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	9
2:30 PM	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	3	8
2:45 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	9
3:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9
3:15 PM	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	**15**
3:30 PM	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**7**	**19**
3:45 PM	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**23**
4:00 PM	**0**	**0**	**4**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**27**
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	4	24
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	19
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	8
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3
5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4
6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:30 PM	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	3	5
6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
Count Total	0	0	35	12	0	17	33	0	0	9	0	25	0	0	0	0	131	
Pk Hr Heavy	**0**	**0**	**10**	**1**	**0**	**3**	**4**	**0**	**0**	**5**	**0**	**4**	**0**	**0**	**0**	**0**	**27**	

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Count Summaries - Bikes

Interval Start	82nd Ave				82nd Ave				Quaker St				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
12:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	4
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	3
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3	4
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	3
3:00 PM	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	3	6
3:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**
3:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	3
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
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6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	2	5	0	6	0	0	0	5	0	4	0	0	0	0	22	
Pk Hr Bike	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	

TJ Wethington
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Leyden Rock
Traffic Impact Study

February 2011

Prepared by:

PBS&J®

an Atkins company

4601 DTC Boulevard
Suite 700
Denver, CO 80237

Leyden Rock
Traffic Impact Study

February 2011

Prepared for:

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LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, CO 80206
(303) 333-1105
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E-mail: lsc@lscdenver.com

February 24, 2012

Mr. Chris Elliott
RRCEA 2 LLC
7353 S. Alton Way
Englewood, CO 80112

RE: Leyden Rock
Average Daily Traffic Letter
(LSC #120030)

Dear Mr. Elliott:

In response to your request, LSC Transportation Consultants, Inc. has prepared this average daily traffic letter for the Leyden Rock development in the City of Arvada, Colorado.

LETTER CONTENTS

This letter and attached figure summarizes the estimated average daily traffic on various streets within the Leyden Rock development.

DIRECTIONAL DISTRIBUTION

The general directional distribution to and from the site is based on the original traffic study completed by Atkins. Seventy percent of site traffic is expected to be oriented to/from the east on West 82nd Avenue. Thirty percent of site traffic is expected to be oriented to/from the west on West 82nd Avenue.

TRIP ASSIGNMENT

The internal streets within the development were modeled to estimate the average daily trips at various locations within the site as shown graphically in Figure 1.

* * * * *

We trust this letter will assist you in your planning efforts for the Leyden Rock development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By _____
Christopher S. McGranahan, PE, PTOE
Associate

2-24-12

CSM/wc

Enclosures: Figure 1

Z:\LSC\Projects\2012\120030\Leyden Rock - ADT letter.wpd

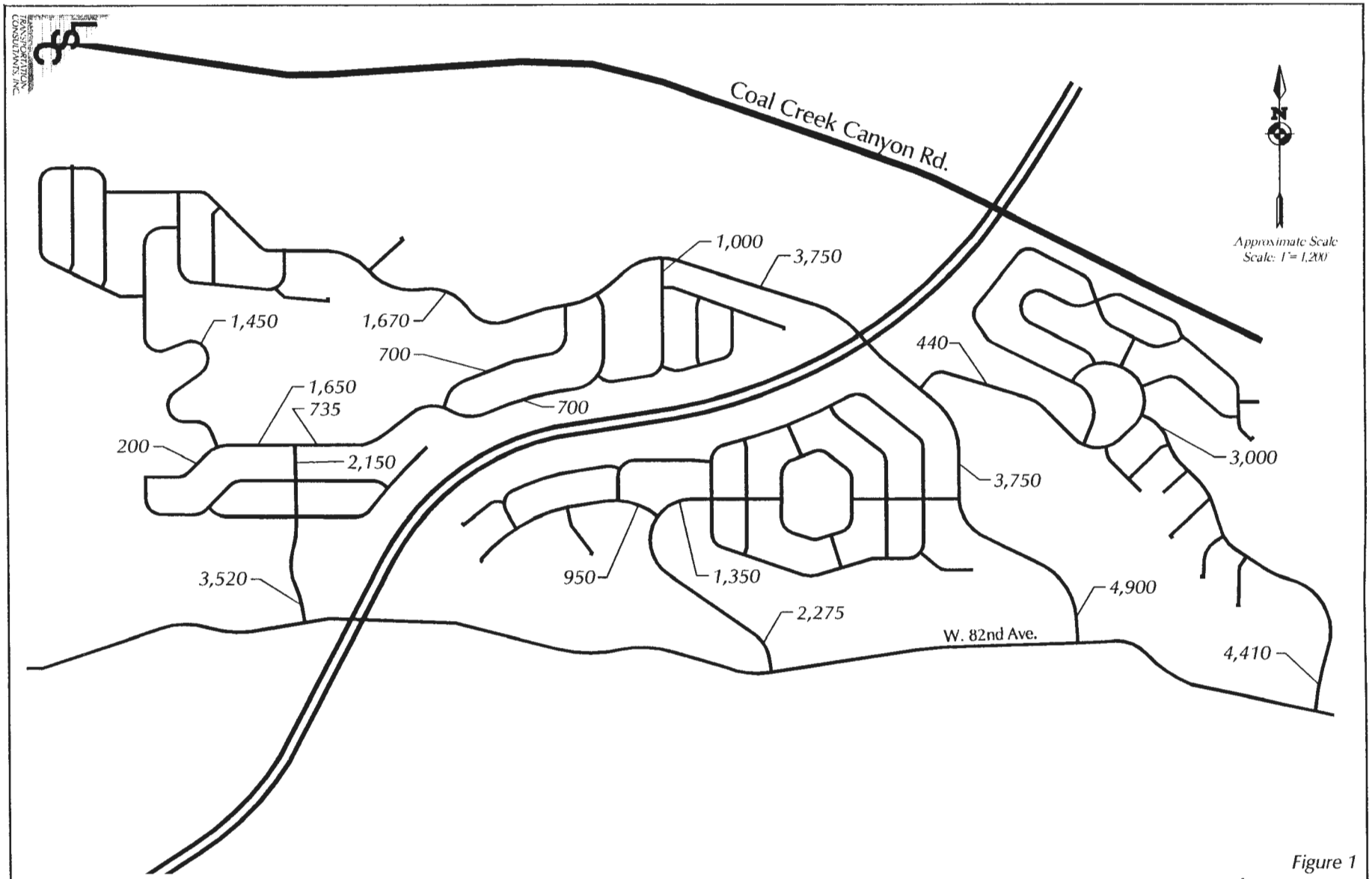

Figure 1

Average Daily Traffic

Leyden Rock (LSC #120030)

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1

EXECUTIVE SUMMARY

Leyden Rock is a residential development planned to be located in Arvada, Colorado. The land is currently located within Jefferson County, and will be annexed to the City upon approval for development. The development is proposed to be located to the north of Leyden Road, between SH 93 and Indiana Street. The land directly west of the site is a Jefferson County solid waste facility, and the land to the east of the site is also currently undeveloped but is planned to be developed as single-family homes as well. The development surrounds the Town of Leyden, which is located along the south side of Leyden Road.

Two parcels are being analyzed for traffic impacts to the roadway network. The eastern parcel is proposed to include 713 single family homes and the western parcel is proposed to include 626 single family homes. The project will be completed in multiple phases, but for purpose of analysis it was assumed the build-out year would be in 2013 and the horizon year analysis was performed for 2030. This study will document the proposed impacts this development will have on the local roadway network and will discuss the necessary improvements required for the surrounding roadways.

Based on the current analyses within the report, the following recommendations were made:

- Right-turn and left-turn auxiliary lanes should be constructed on Leyden Road at each site entrance.
- Right-turn lanes are recommended exiting the site at Leyden Ranch, the east Leyden Rock exit, and the west Leyden Rock exit.
- The intersection of Indiana Street and Leyden Road will require auxiliary lane improvements for the northbound left turn movement and an eastbound right-turn lane will need to be constructed.
- The Indiana Street and Leyden Road intersection will require additional capacity improvements with construction of the development, which can be accomplished by [redacted]. Either of these improvements will create an acceptable overall intersection LOS, but will require a short additional receiving lane on either northbound Indiana Street or westbound Leyden Road, respectively.
- A westbound left turn lane is recommended at the intersection of SH 93 and Leyden Road.
- The southbound left turn lane at SH 93 and Leyden Road will need to be improved.
- A westbound to southbound left turn acceleration lane may be warranted at SH 93 and Leyden Road.
- The intersections of Leyden Road/Leyden Ranch site entrance, and SH 93/Leyden Road may warrant signalization in the long-term future depending on background traffic volumes.

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2

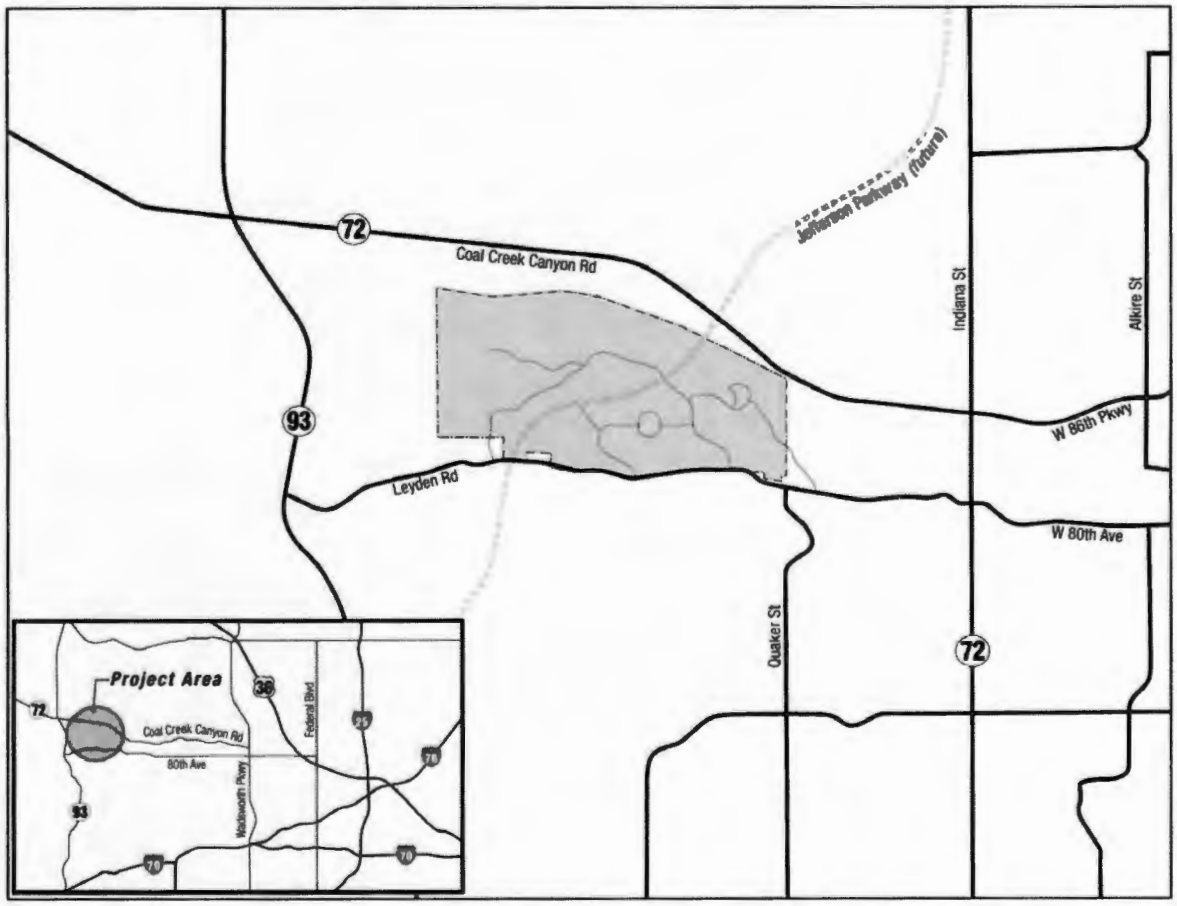
INTRODUCTION

The purpose of this Traffic Impact Study (TIS) is to determine and analyze the impacts on the surrounding roadway network by the proposed development of Leyden Rock. The proposed development is currently located in Jefferson County, and will be annexed into the City of Arvada as part of this project. The site is located north of Leyden Road between SH 93 and Indiana Street (Figure 1).

This analysis documents traffic conditions during the morning and evening weekday peak hours of the site, describes the existing roadway network, forecasts and distributes site-generated traffic volumes, and analyzes the effect of the site-generated traffic in combination with the background traffic growth over a 20-year planning horizon. Time periods analyzed include 2010 (existing conditions), 2013 (opening conditions), and 2030 (20-year horizon).

Access to the development is proposed solely from the south from Leyden Road. Leyden Road can be accessed from the west by SH 93, from the east by Indiana Street, and from the south by Quaker Street.

Figure 1
Vicinity and Project Maps



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3

EXISTING CONDITIONS

A. Existing Site Characteristics

The proposed site is currently undeveloped. Only one road is directly adjacent to the property, which is Leyden Road. Immediately east of the site is another proposed residential development, Leyden Ranch, with 133 proposed single-family homes. Leyden Ranch was not included in the analysis of the existing conditions. Directly west of the development is a Jefferson County solid waste facility, so no future development is planned on this site. Along the south side of Leyden Road near the project site is the Town of Leyden.

B. Existing Roadway Network

The major roads surrounding the site are: Leyden Road to the south, SH 93 to the west, Indiana Street to the east, and Quaker Street to the south. The Union Pacific Railroad fronts the northern limits of the property, therefore no access is proposed from this direction.

Leyden Road is a two-lane paved county road in the vicinity of the site. According to the City of Arvada's Comprehensive Plan, it is planned to be a Major Collector in the future. The speed limit from Indiana Street through the Town of Leyden is posted at 30 mph, and from west of Town to SH 93 the posted speed limit is 40 mph.

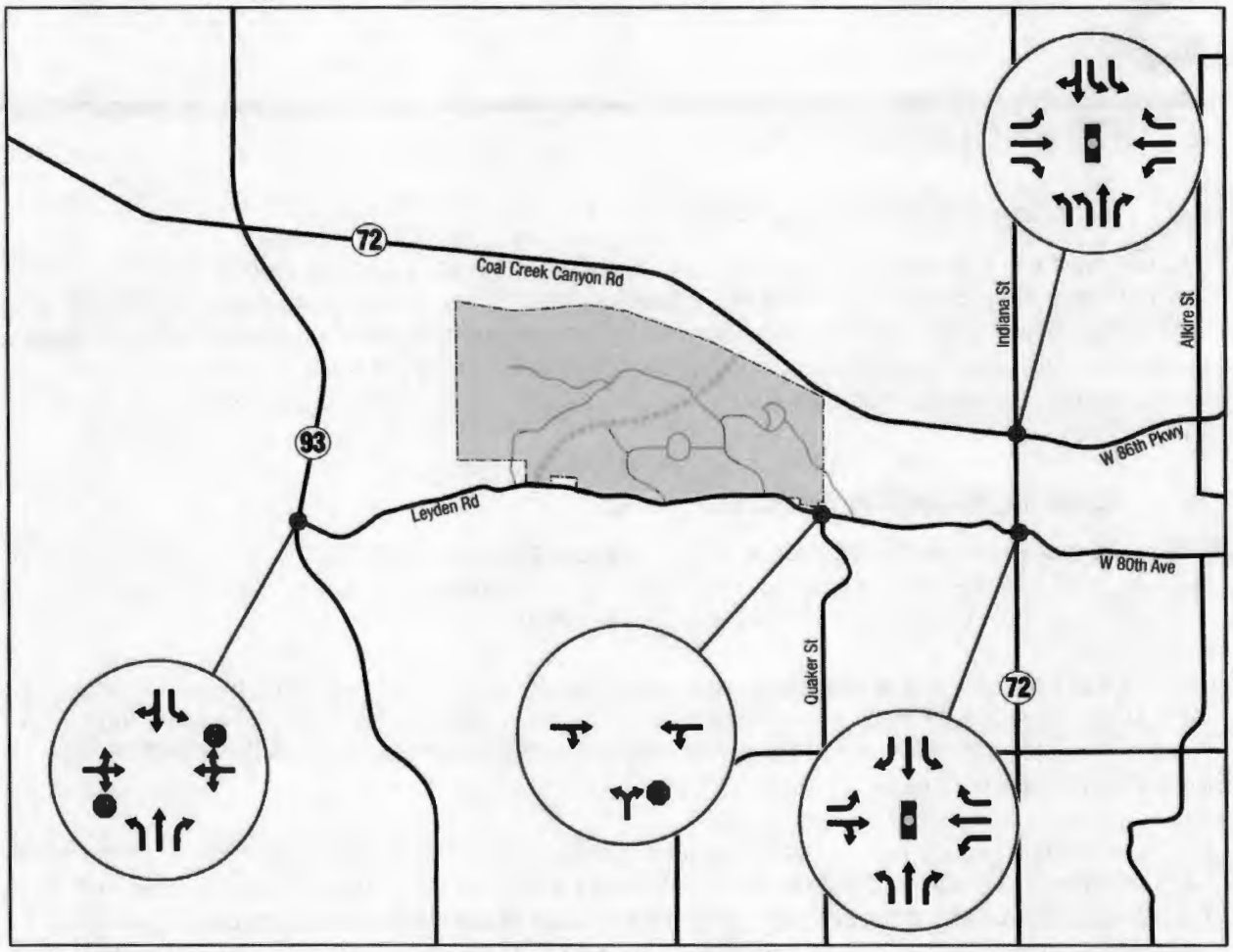
SH 93 is a state highway that is classified as an Expressway (E-X) according to the Colorado Department of Transportation (CDOT). It is a two-lane undivided highway in the vicinity of Leyden Road, with a posted speed limit of 55 mile per hour (mph) in the vicinity of the intersection. Travel lanes are 12 feet wide and there are right and left turn auxiliary lanes on SH 93 at the intersection with Leyden Road. The intersection of SH 93 and Leyden Road is a four-leg intersection with the west leg leading to a single residential property.

Indiana Street (SH 72) is also a state highway. This road is classified as a Non-Rural Regional Highway (NR-A) by CDOT and as an Arterial Parkway by the City of Arvada. Indiana Street is a two-lane undivided highway near the project site, with a posted speed limit of 50 mph south of Leyden Road and 45 mph north of Leyden Road. Travel lanes are 12 feet wide and right and left turn deceleration lanes are present at all approaches at the intersection of Indiana Street and Leyden Road. At the intersection of Indiana Street (SH 72) and West 86th Parkway/Coal Creek Canyon Road, SH 72 changes from north/south to east/west. The intersection of West 86th Parkway/Indiana Street will be analyzed as part of this study.

Quaker Street is a two-lane street classified as a Major Collector by the City of Arvada. Quaker Street primarily provides access to residential development to the south of Leyden Street. The intersection of Quaker Street and Leyden Road is stop-controlled, and there are no auxiliary lanes present.

The existing laneage and intersection control of all of the study area intersections are identified in Figure 2.

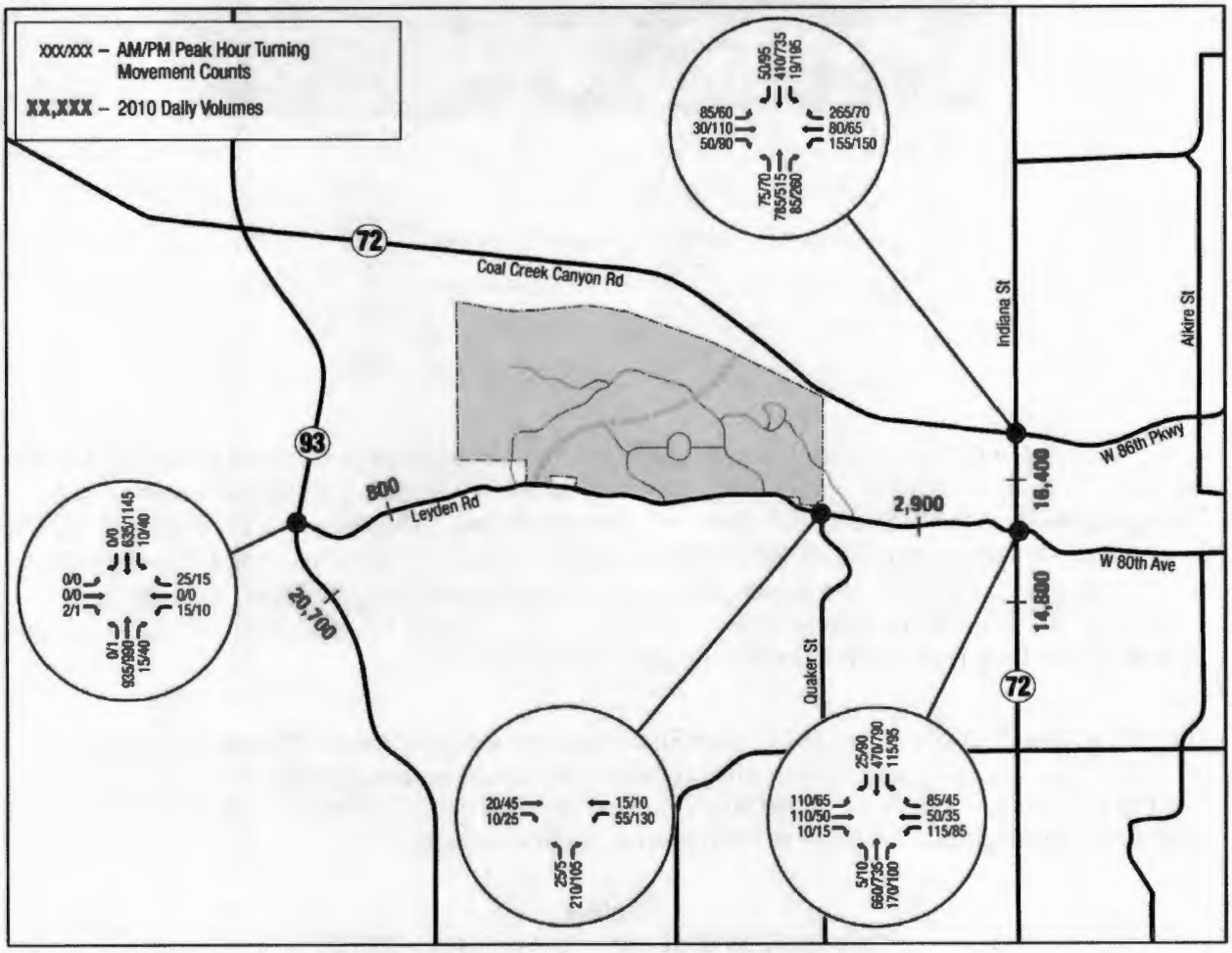
Figure 2
Existing Lane Configuration and Intersection Control



C. Existing Traffic Volumes

Morning and evening peak hour turning movement counts (TMCs) and weekday daily volumes were collected for this study in September 2010. The intersections included in the study were determined by City of Arvada staff. Traffic counts were collected from 7:00 to 9:00 a.m. and 4:30 to 6:30 p.m. during a normal weekday. The morning and evening peak hour traffic and the daily traffic volumes are identified in Figure 3. Traffic counts were not collected at 86th Parkway and Indiana Street, but TMC data was obtained from the City for counts performed in 2008. A 3-percent growth rate provided by the City of Arvada was applied to the 2008 volumes traffic to account for 2010 volumes.

Figure 3
Existing (2010) Traffic Volumes



D. Existing (2010) Traffic Operations

Level of service (LOS) is a rating system used in traffic engineering to measure the effectiveness of the operating conditions of roadways and intersections. Several variables impact the quality of traffic flow including speed, travel time, vehicular delays, traffic interruptions, and the freedom to maneuver. There are six LOS ranging from "A" to "F". Level "A" is defined as being ideal flow conditions with little or no delays whereas level "F" is defined as conditions where extreme delays may be encountered. Each level is used to describe traffic flow in terms of delay experienced by motorists. LOS at signalized intersections is reported as the average delay of all approaches, whereas the highest approach delay is reported as the LOS at two-way stop controlled intersections. Table 1 shows the criteria for establishing the LOS for stop-controlled and signalized intersections.

Table 1
Intersection Level of Service Criteria

LOS	Control Delay per Vehicle (sec/veh)	
	Un-signalized Intersection	Signalized Intersection
A	0-10	≤ 10
B	>10-15	>10-20
C	>15-25	>20-35
D	>25-35	>35-55
E	>35-50	>55-80
F	>50	>80

Level of Service and capacity analyses were conducted for existing traffic conditions during the AM and PM roadway peak hours at the four existing study area intersections using techniques described in the Transportation Research Board's 2000 *Highway Capacity Manual*. The analysis was performed based on the HCM methodology using SYNCHRO traffic software. The results of the existing LOS analysis are shown in Table 2. Currently, the signalized intersections of Indiana Street/West 86th Parkway and Indiana Street/Leyden Road operate at an acceptable LOS C or better. No individual movement operates at worse than a LOS D, which is considered acceptable operations.

The intersection of Leyden Road and Quaker Street operates acceptably at a LOS A or B during peak periods. However, SH 93 and Leyden Road currently operates at an unacceptable LOS E/F during the AM/PM peak hours. This is due to the high volume of through traffic on SH 93 and the lack of available gaps for left turning traffic making the westbound to southbound turn.

Table 2
Existing Level of Service Analysis – 2010

Intersection	Movement/ Approach	WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS
West 86th Parkway & Indiana St*	Eastbound	37	D	35	D
	Westbound	37	D	35	D
	Northbound	13	B	14	B
	Southbound	16	B	29	C
	Overall	**21**	**C**	**25**	**C**
Leyden Rd & Indiana St*	Eastbound	40	D	40	D
	Westbound	26	C	30	C
	Northbound	27	C	18	B
	Southbound	13	B	9	A
	Overall	**24**	**C**	**16**	**B**
Leyden Rd & Quaker St	Eastbound	0	A	0	A
	Westbound	6	A	7	A
	Northbound	10	B	9	A

Table 2
Existing Level of Service Analysis – 2010

Intersection	Movement/ Approach	WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS
	Overall	**10**	**B**	**9**	**A**
Leyden Rd & SH 93	Eastbound	13	B	21	C
	Westbound	40	E	90	F
	Northbound	0	A	11	B
	Southbound	10	B	11	B
	Overall	**40**	**E**	**90**	**F**

**Signalized intersection*

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4

PROPOSED CONDITIONS

A. Project Description

Leyden Rock will be situated on approximately 950 acres. There are 1,339 single family homes planned to be constructed on the property along with two community parks. The development will obtain access to the local roadway network via Leyden Road at four proposed locations. Three of the accesses will be from the development onto Leyden Road, and one of the accesses onto Leyden Road is proposed via a shared access with the Leyden Ranch development, the property directly east of Leyden Rock.

Jefferson Parkway is planned to bisect the property when it is constructed. However, no local access will be provided to the Parkway. There is one planned underpass between the east and west side of the Parkway on the property.

B. Site Trip Generation

The trip generation rates employed in this analysis were obtained from the *ITE Trip Generation Manual*, Eight Edition (2008). The analysis was performed during the peak hour of the adjacent roadway, which was identified as 7:00-8:00am in the morning and 4:30-5:30pm in the evening based on existing traffic counts. Table 3 summarizes the daily trips as well as the morning and evening peak hour trip generation according to the ITE Trip Generation rates. It is projected that Leyden Rock will generate approximately 12,800 trips per day on a weekday, and will generate approximately 1,000 vehicle trips per hour during the morning and 1,350 trips per hour during the evening peak. Trip generation rates are based on the number of housing units, so the site-generated trips do not increase from the build-out year to the 2030 horizon year analysis.

Table 3
Trip Generation for Leyden Rock

Land Use/ITE Code	Units	Daily		Weekday AM Peak				Weekday PM Peak			
		Rate	Trips	Rate	Hourly Trips	Enter	Exit	Rate	Hourly Trips	Enter	Exit
Single-Family Home (210)	1,339	9.57	12,814	0.75	1,004	**251**	**753**	1.01	**1,352**	**852**	**500**

No trip reductions were applied to the rates for internal circulation or pass-by for the analysis. The parks are planned to be used primarily as a local community amenity within the development; therefore no additional trips were added for the two on-site parks.

C. [redacted]

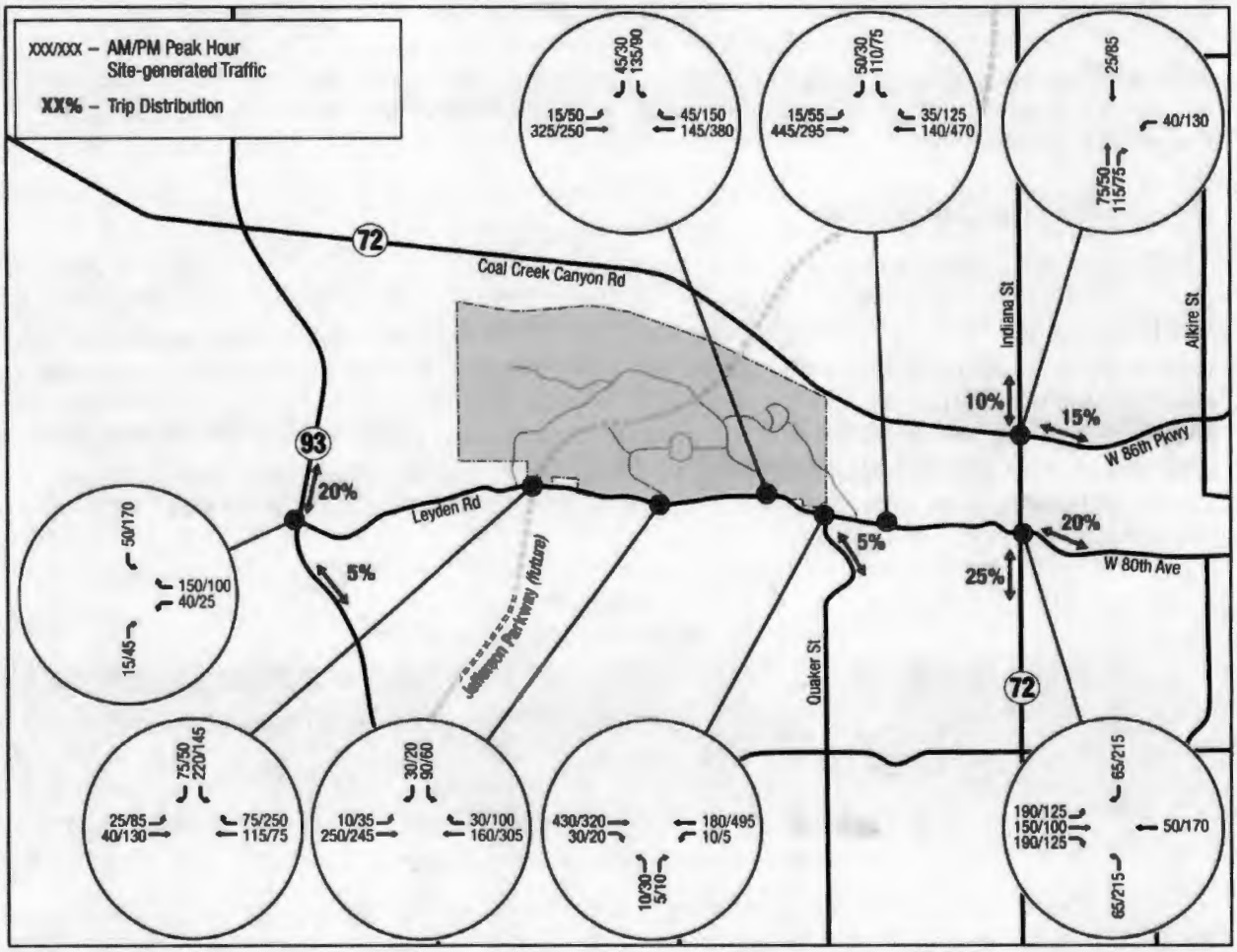
The distribution of site traffic was based on existing travel patterns for the residential traffic south of Leyden Road, as well as the direction of major employment centers in the area and major destinations in the region. The trip distribution is projected to use the following roads to access the major destinations in the area:

- 20% to/from SH 93 north

- [redacted] – increase?
- 5% to/from Quaker Street south
- 10% to/from Indiana Street north (towards US 36/Superior)
- 15% to/from Indiana Street to W 86th Parkway (towards US 36)
- 20% to/from W 80th Avenue
- 25% to/from Indiana Street south – decrease?

Because Leyden Rock is a new development, the generated trips will result in additional traffic on the surrounding roadway network. Figure 4 identifies the trip distribution to and from the site as well as the number of site-generated trips assigned to each turning movement of the study area intersections.

Figure 4
Trip Distribution and Assignment



D. Internal Roadway Network

Projected traffic volumes for the proposed local roadway network were identified to determine the required street classification based on City of Arvada standards. The majority of the interior roadways are planned to be constructed as local roads, with two minor collectors and one major collector that will intersect Leyden Road. Shared access is planned with the Leyden Rock development to the east of this parcel. The added site traffic will require the on-site road intersecting Leyden Road to be modified from a minor collector to a major collector.

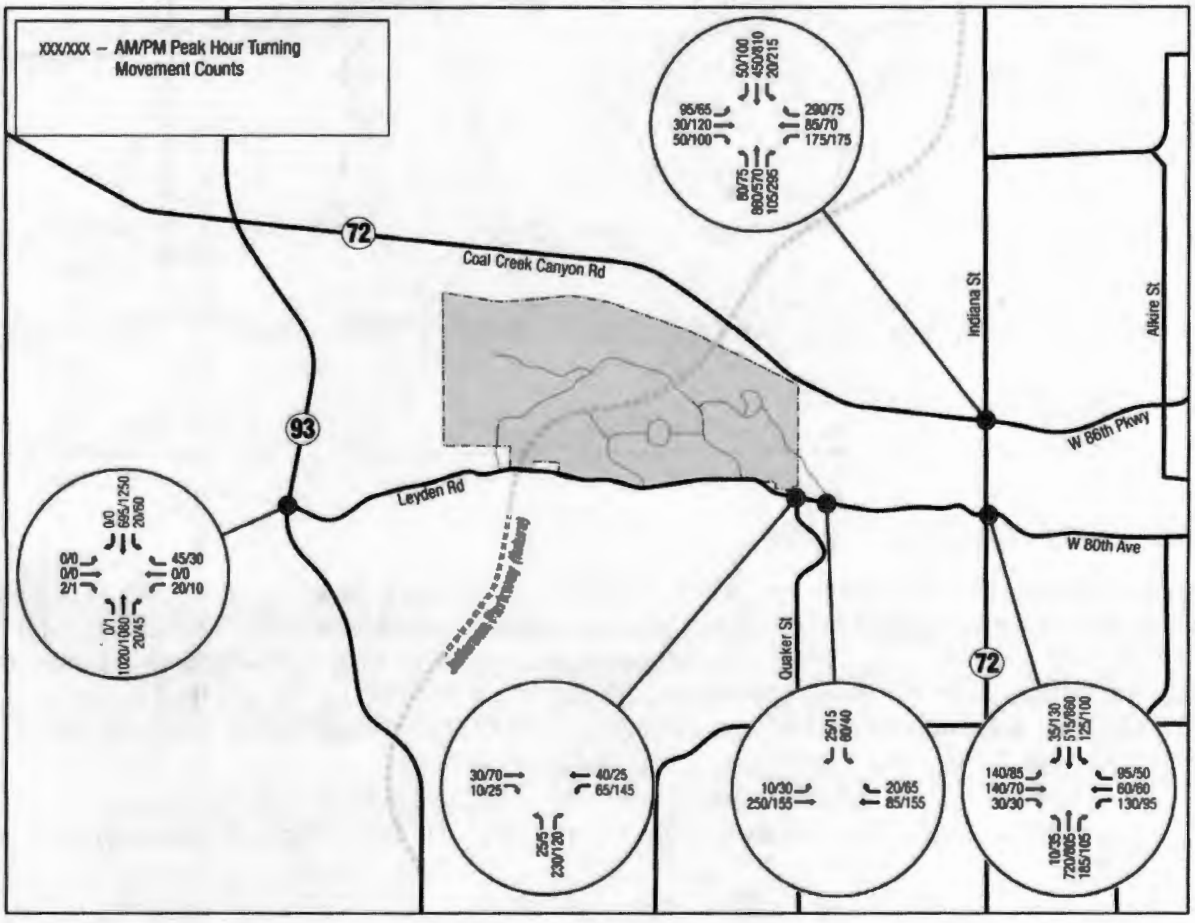
E. Short-Term (2013) Traffic Conditions

Construction of the site is expected to begin in 2011, and the development is planned to occur in multiple phases over the course of several years. The short-term year analyzed is three years in the future per Jefferson County Transportation Impact Study guidelines. This year represents a "Short-term Horizon at Build-Out" scenario. However, it is likely that build-out will occur sometime after 2013, so the analysis and recommendations shown in this report may in reality not occur until several years after 2013.

Short-Term Traffic Volumes

Analysis was performed for both the no-build and build scenarios of the project. The no-build scenario is referred to as the background condition. The background traffic also includes the proposed traffic from the Leyden Rock development which will add approximately 1,400 daily trips to the surrounding roadway network. The trip distribution assumptions shown in Figure 4 were also applied to Leyden Rock traffic. The background traffic condition increased the traffic volumes to account for three years of growth from 2010 to 2013 along the surrounding roadways based on a three percent annual projected growth rate provided by City of Arvada staff. Figure 5 identifies the projected traffic volumes based on opening year background traffic only.

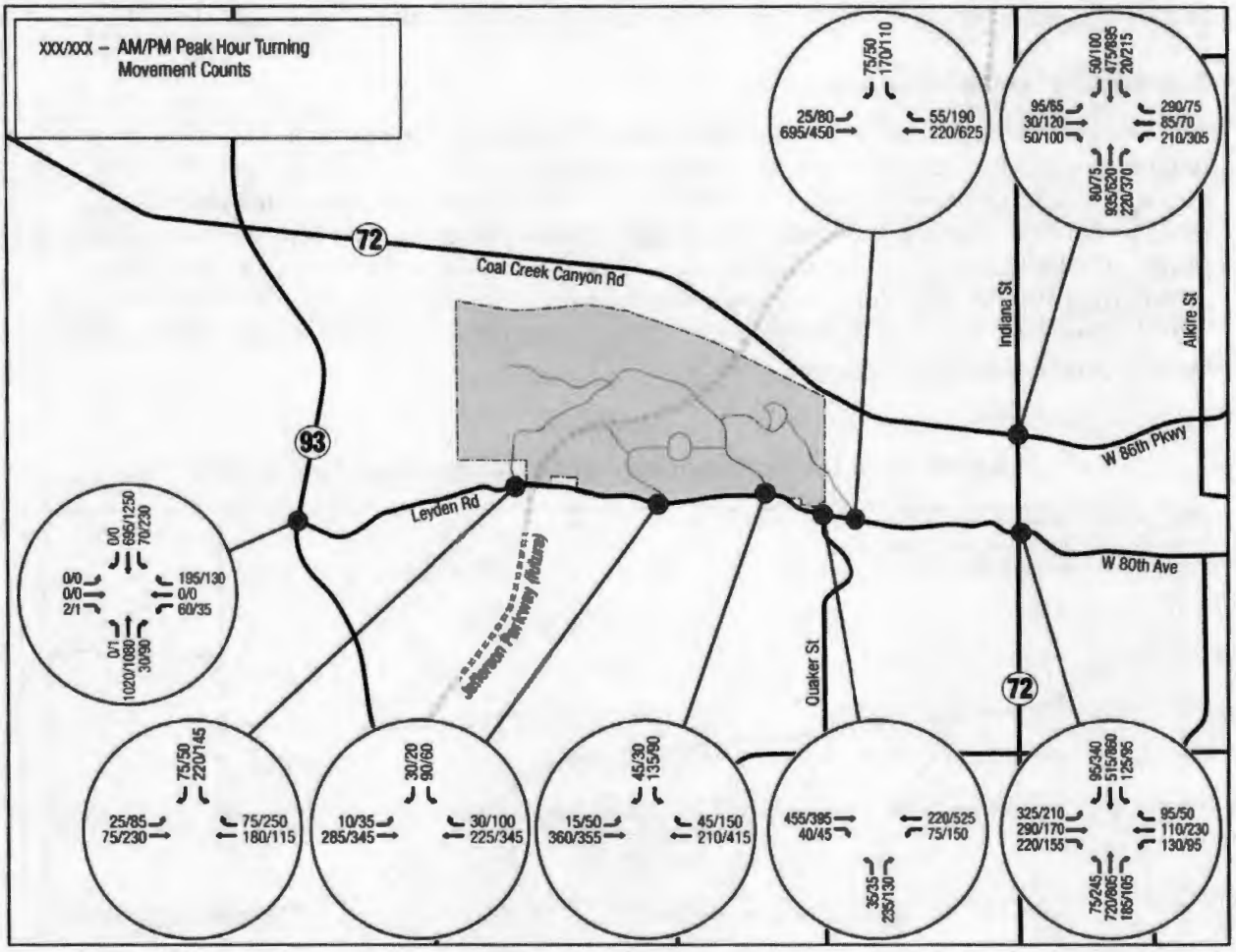
Figure 5
Short-Term Traffic Volumes – 2013 Background Traffic Only



The opening year background traffic plus site generated traffic volumes includes the 2013 background traffic conditions plus the 12,800 projected daily trips calculated for the development from the *ITE Trip*

Generation Manual. The projected traffic volumes for the opening year background plus site generated traffic volumes can be seen in Figure 6.

Figure 6
Short-Term Traffic Volumes - 2013 Background plus Site Traffic



Short-Term Traffic Operations

An intersection LOS analysis was completed using the short-term year background and background plus site-generated traffic volumes for the project area intersections (see Appendix C). A summary of this LOS analysis is presented in Table 4. For the short-term analysis, all roadways were analyzed under their existing configuration. For the build condition, auxiliary lanes were modeled where they will be warranted due to the development of Leyden Rock per CDOT or City requirements. Under the build condition the following auxiliary lanes were included in the analysis:

- All eastbound left- and westbound right-turn lanes on Leyden Road at the site accesses
- Southbound right-turn lanes existing the site accesses (with the exception of the center Leyden Rock access)
- A westbound left-turn lane at SH 93 and Leyden Road
- An eastbound right-turn lane at Leyden Road and Indiana Street

Under background traffic conditions, all of the study area intersections will continue to operate at an acceptable LOS (LOS D or better) with the exception of Leyden Road and SH 93, which had failing operations under existing conditions. Without any improvements at this intersection, the westbound to

southbound left turn movement will continue to operate at a LOS F due to the high traffic volumes on SH 93.

The background plus site traffic scenario will operate acceptably at all intersections upon build-out with the exception of West 86th Parkway/Indiana Street, and Leyden Road/Leyden Ranch site access. Because of the high traffic volumes traveling through the intersection of Leyden Road and Indiana Street additional improvements will be required upon site build-out. The existing single westbound left turn movement was converted to a dual left turn. With this improvement, the intersection will operate acceptably upon full build-out of the site. Recommended roadway improvements will be discussed in more detail in Chapter 5.

Table 4
Level of Service Analysis – Short-Term Year (2013)

Intersection	Movement/ Approach	No-Build				Build			
		WD AM		WD PM		WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
West 86th Parkway & Indiana St*	Eastbound	36	D	35	C	35	D	35	D
	Westbound	41	D	38	D	52	D	103	F
	Northbound	16	B	16	B	20	C	21	C
	Southbound	17	B	44	D	24	C	118	F
	Overall	**24**	**C**	**32**	**C**	**29**	**C**	**74**	**E**
Leyden Rd & Indiana St*	Eastbound	44	D	39	D	41	D	33	C
	Westbound	27	C	30	C	35	D	39	D
	Northbound	24	C	24	C	28	C	42	D
	Southbound	13	B	13	B	14	B	57	E
	Overall	**24**	**C**	**21**	**C**	**29**	**C**	**46**	**D**
Leyden Rd & Quaker St	Eastbound	0	A	0	A	0	A	0	A
	Westbound	5	A	7	A	3	A	3	A
	Northbound	10	B	10	A	23	C	25	D
	Overall	**10**	**B**	**10**	**A**	**23**	**C**	**25**	**D**
Leyden Rd & SH 93	Eastbound	14	B	25	C	14	B	25	C
	Westbound	86	F	292	F	> 500	F	> 500	F
	Northbound	0	A	12	B	0	A	12	B
	Southbound	11	B	12	B	12	B	17	C
	Overall	**86**	**F**	**292**	**F**	**> 500**	**F**	**> 500**	**F**
Leyden Rd & Leyden Ranch Access (Access A)	Eastbound	7	A	8	A	8	A	10	B
	Westbound	0	A	0	A	0	A	0	A
	Southbound	11	B	11	B	36	E	68	F
	Overall	**11**	**B**	**11**	**B**	**36**	**E**	**68**	**F**
Leyden Rd & Eastern Leyden	Eastbound	--	--	--	--	8	A	9	A
	Westbound	--	--	--	--	0	A	0	A

Table 4
Level of Service Analysis – Short-Term Year (2013)

Intersection	Movement/ Approach	No-Build				Build			
		WD AM		WD PM		WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Rock Access (Access B)	Southbound	--	--	--	--	16	C	22	C
	Overall	**--**	**--**	**--**	**--**	**16**	**C**	**22**	**C**
Leyden Rd & Central Leyden Rock Access (Access C)	Eastbound	--	--	--	--	8	A	8	A
	Westbound	--	--	--	--	0	A	0	A
	Southbound	--	--	--	--	14	B	17	C
	Overall	**--**	**--**	**--**	**--**	**14**	**B**	**17**	**C**
Leyden Rd & West Leyden Rock Access (Access D)	Eastbound	--	--	--	--	8	A	8	A
	Westbound	--	--	--	--	0	A	0	A
	Southbound	--	--	--	--	13	B	15	C
	Overall	**--**	**--**	**--**	**--**	**13**	**B**	**15**	**C**

**Signalized intersection*

F. Horizon Year (2030) Traffic Conditions

The horizon year analyzes traffic conditions in the long-term both without and with construction of the proposed project. To determine background traffic volumes, a growth rate was applied to the surrounding roadway network. The site-generated trips were then applied to the background traffic volumes to determine the total future volumes on the roadway network.

Horizon Year Traffic Volumes

Background traffic growth includes the growth of the traffic in the area not attributed to development of the site. To develop the 2030 background traffic, a three percent annual growth rate was applied to all movements at each of the study area intersections. This growth rate was based on recommendations from City of Arvada staff. As with 2013 traffic conditions, the Leyden Ranch site trips were also added to the background traffic. Figure 7 and Figure 8 show the horizon year background traffic and the background plus site-generated traffic, respectively.

According to the DRCOG *2035 Metro Vision Regional Transportation Plan* and other area studies, several roadways within the study area limits are planned to be widened to four lanes by the horizon year. The following roads are planned to be four lanes in the vicinity of the study area: SH 93, Coal Creek Canyon Road (SH 72) west of Indiana Street, West 86th Parkway, and Indiana Street. These improvements were included in both the 2030 background and the build traffic models. Leyden Road is proposed to be a major collector (*City of Arvada Comprehensive Plan*) in the future, and was modeled as a two-lane facility. Traffic from the proposed Jefferson Parkway was not included in the future intersection analysis. This toll road will likely create a shift in travel patterns compared to existing conditions, but no travel demand modeling was performed as part of the efforts of this TIS so the shifts in patterns were not analyzed as part of this study.

Figure 7
Horizon Year Traffic Volumes – 2030 Background Traffic Only

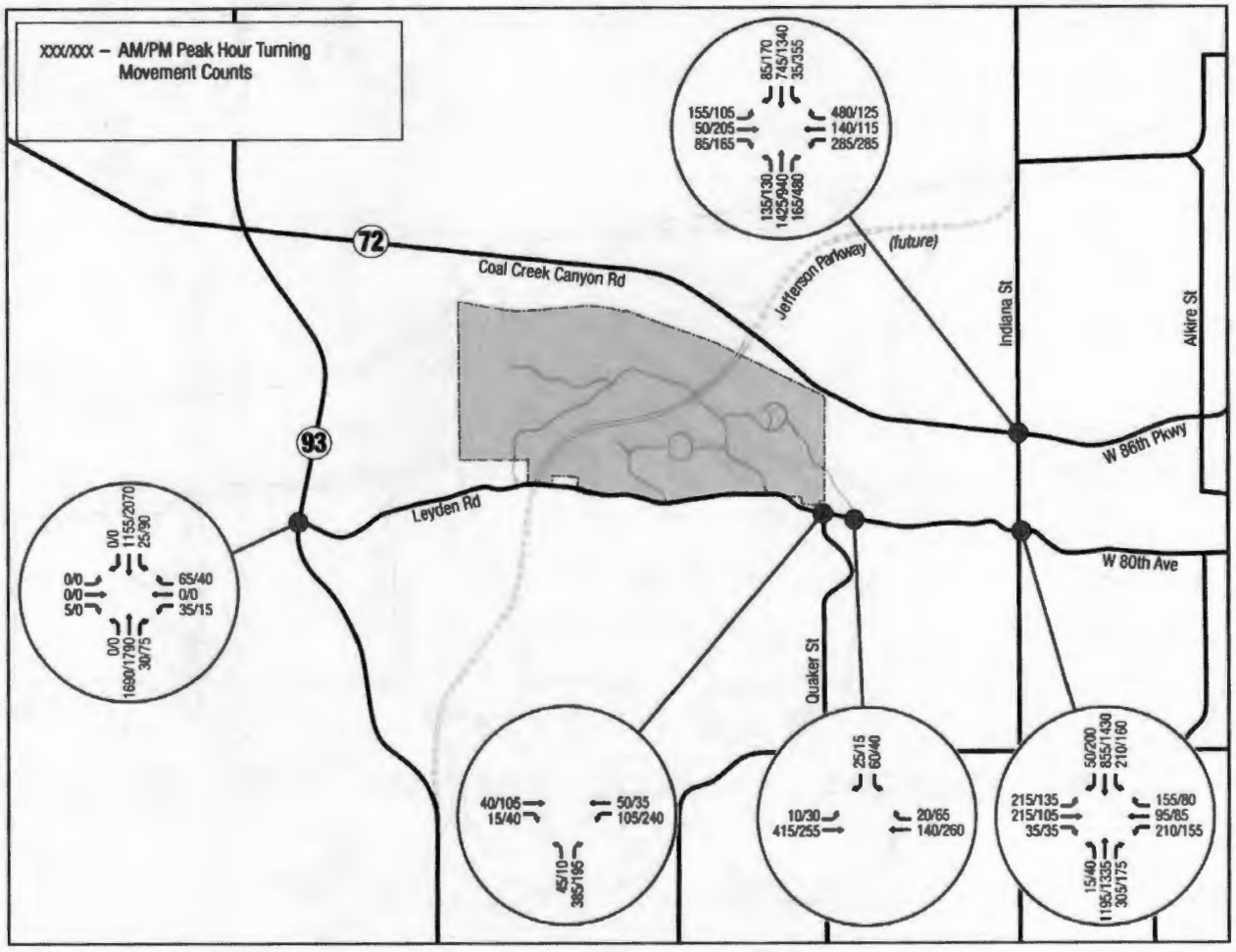
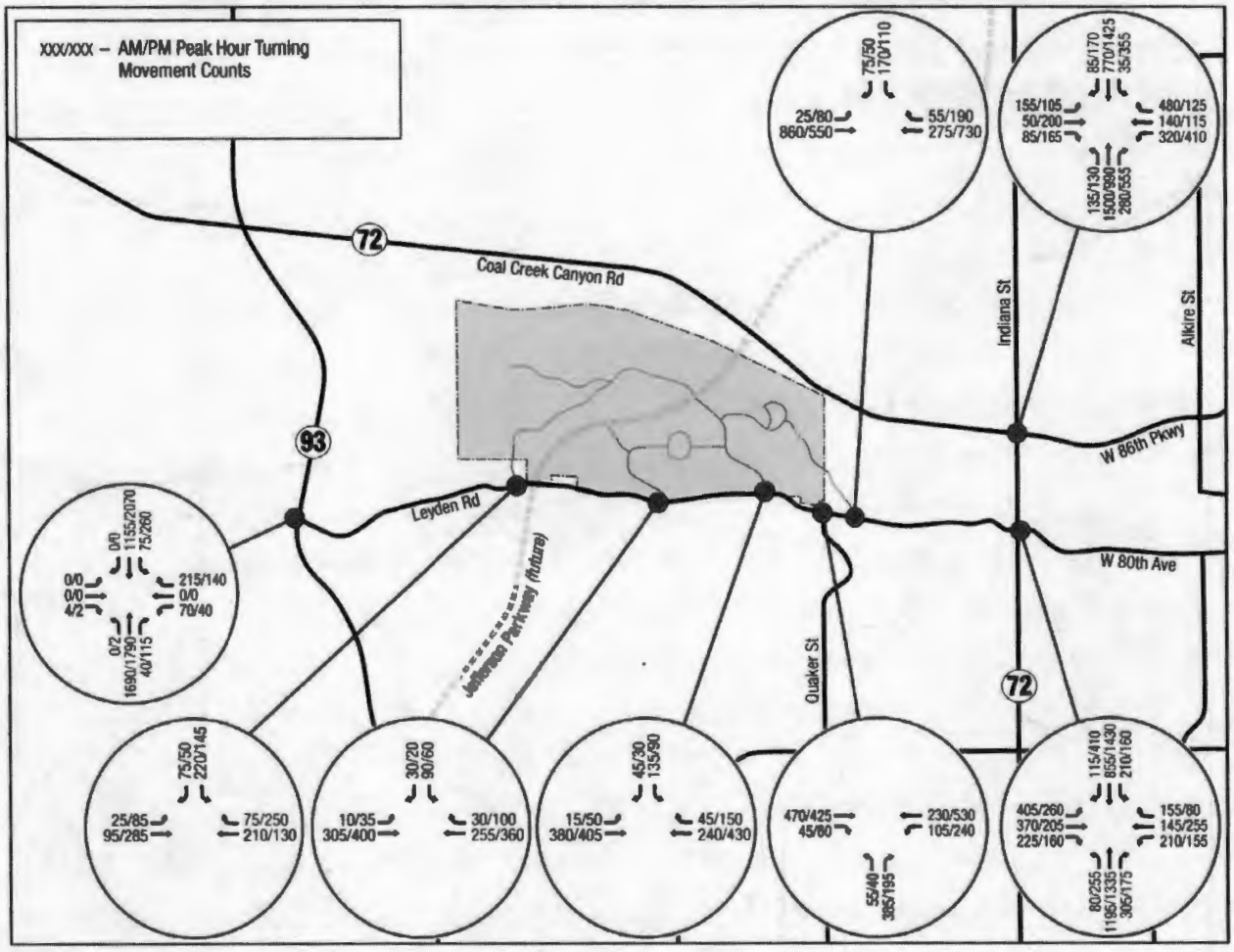


Figure 8
Horizon Year Traffic Volumes – 2030 Background plus Site Traffic



Horizon Year Traffic Operations

Several movements at the signalized intersection of Indiana Street and West 86th Parkway were proposed to operate at failing levels of service (LOS E or F) based on background traffic only. Because these conditions would require improvements regardless of the proposed site traffic, the following improvements were made to the background traffic model for the intersection of West 86th Parkway and Indiana Street. These improvements were the minimal improvements that could be made to the intersection to obtain a LOS D or better for operations:

- Eastbound left turn was converted to a dual left and modeled as a protected only movement
- Westbound left turn was converted to a dual left and modeled as a protected only movement
- Westbound right turn was provided a free movement with an acceleration lane

In addition, the signal timing for both of the existing signals was optimized for the future conditions. With the improvements noted above and the planned roadway widening improvements, all of the intersections under the no-build condition are proposed to operate at a

LOS D or better in the future with the exception of SH 93/Leyden Road. The horizon year LOS calculations are included in Appendix D and the results are summarized in Table 5.

Under the long-term build condition, several intersections have one or more failing movements due to the added traffic from the Leyden Rock development. SH 93 and Leyden Road will continue to have a failing westbound to southbound left turn movement. In addition, the southbound to eastbound left turn will fail in the evening peak period. At the intersection of Leyden Road and Quaker Street, the northbound left turn will fail during both the morning and evening peak due to the added site traffic on Leyden Road and the lack of available gaps in traffic. At Indiana Street and Leyden Road, the eastbound dual left turn improvement required based on the 2013 build condition was also modeled for the long-term. Recommended improvements will be discussed in Chapter 5 of this report.

All of the proposed accesses from the site are projected to operate acceptably in the future. The Leyden Ranch site access will require additional mitigation in the future because of a proposed failing southbound left turn movement and high peak hour volumes between Quaker Street and Indiana Street.

Table 5
Level of Service Analysis – Horizon Year (2030)

Intersection	Movement/ Approach	No-Build				Build			
		WD AM		WD PM		WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
West 86th Parkway & Indiana St*	Eastbound	41	D	39	D	41	D	39	D
	Westbound	17	B	38	D	17	B	58	D
	Northbound	24	C	16	B	19	B	24	C
	Southbound	26	C	28	C	28	C	33	C
	Overall	**24**	**C**	**26**	**C**	**22**	**C**	**34**	**C**
Leyden Rd & Indiana St*	Eastbound	46	D	38	D	42	D	46	D
	Westbound	45	D	39	D	57	E	53	D
	Northbound	29	C	22	C	31	C	32	C
	Southbound	21	C	10	B	32	C	25	C
	Overall	**31**	**C**	**19**	**B**	**37**	**D**	**33**	**C**
Leyden Rd & Quaker St	Eastbound	0	A	0	0	0	A	0	A
	Westbound	5	A	7	A	9	A	14	B
	Northbound	12	B	11	B	71	F	387	F
	Overall	**12**	**B**	**11**	**B**	**71**	**F**	**387**	**F**
Leyden Rd & SH 93	Eastbound	13	B	23	C	13	B	23	C
	Westbound	> 500	F	> 500	F	> 500	F	> 500	F
	Northbound	0	A	21	C	0	A	21	C
	Southbound	17	A	25	C	20	C	115	F
	Overall	**> 500**	**F**	**> 500**	**F**	**> 500**	**F**	**> 500**	**F**

Table 5
Level of Service Analysis – Horizon Year (2030)

Intersection	Movement/ Approach	No-Build				Build			
		WD AM		WD PM		WD AM		WD PM	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Leyden Rd & Leyden Ranch Access (Access A)	Eastbound	8	A	8	A	8	A	11	B
	Westbound	0	A	0	A	0	A	0	A
	Southbound	13	B	13	B	115	F	183	F
	Overall	**13**	**B**	**13**	**B**	**115**	**F**	**183**	**F**
Leyden Rd & Eastern Leyden Rock Access (Access B)	Eastbound	--	--	--	--	8	A	9	A
	Westbound	--	--	--	--	0	A	0	A
	Southbound	--	--	--	--	17	C	24	C
	Overall	**--**	**--**	**--**	**--**	**17**	**C**	**24**	**C**
Leyden Rd & Central Leyden Rock Access (Access C)	Eastbound	--	--	--	--	8	A	8	A
	Westbound	--	--	--	--	0	A	0	A
	Southbound	--	--	--	--	15	B	19	C
	Overall	**--**	**--**	**--**	**--**	**15**	**B**	**19**	**C**
Leyden Rd & West Leyden Rock Access (Access D)	Eastbound	--	--	--	--	8	A	8	A
	Westbound	--	--	--	--	0	A	0	A
	Southbound	--	--	--	--	14	B	17	C
	Overall	**--**	**--**	**--**	**--**	**14**	**B**	**17**	**C**

**Signalized intersection*

5

PROPOSED IMPROVEMENTS

The future laneage recommendations and intersection control are shown in Figure 9 based on already identified improvements in the *2035 Metro Vision Regional Transportation Plan*, *City of Arvada Comprehensive Plan*, and CDOT and City auxiliary lane requirements. The auxiliary lane improvements are recommended to be implemented when the project is first constructed, but other improvements will be dependent on future capital improvement projects and when warrants are reached (such as dual left turn lane improvements or signalization).

Both Leyden Rock and the parcel to the east, Leyden Ranch, are undergoing review for proposed development. It is assumed that some of the roadway improvements will be shared responsibility with Leyden Ranch.

The following summarizes the recommended improvements to be implemented for the project:

Site Accesses/Leyden Road

- Right-turn and left-turn auxiliary lanes should be constructed on Leyden Road at each proposed site entrance.
- Right-turn lanes are recommended exiting the site at Leyden Ranch, the east Leyden Rock exit, and the west Leyden Rock exit.
- In the long-term, the intersection of the Leyden Ranch site access with Leyden Road may warrant additional mitigation because of long proposed delays for southbound left-turning traffic. A signal may be warranted long-term if high background traffic growth occurs on Leyden Road.

Indiana Street/Leyden Road

- The intersection of Indiana Street and Leyden Road will require auxiliary lane improvements for the [redacted] and an [redacted] will need to be constructed.
- The Indiana Street and Leyden Road intersection [redacted] improvements with construction of the development, which can be accomplished by converting the eastbound left turn lane to a dual-left lane, or by converting the northbound left to a dual left turn lane. Either of these improvements will create an acceptable overall intersection LOS, but will require a short additional receiving lane on either northbound Indiana Street or westbound Leyden Road, respectively.

SH 93/Leyden Road

- A [redacted] is recommended at the intersection of SH 93 and Leyden Road.
- The [redacted] lane at SH 93 and Leyden Road is currently inadequate and will need to be improved to accommodate horizon year queues.

- A [redacted] may be warranted at SH 93 and Leyden Road.
- The intersection of SH 93 and Leyden Road [redacted] in the long-term if the directional distribution of traffic volumes changes when Jefferson Parkway is completed.

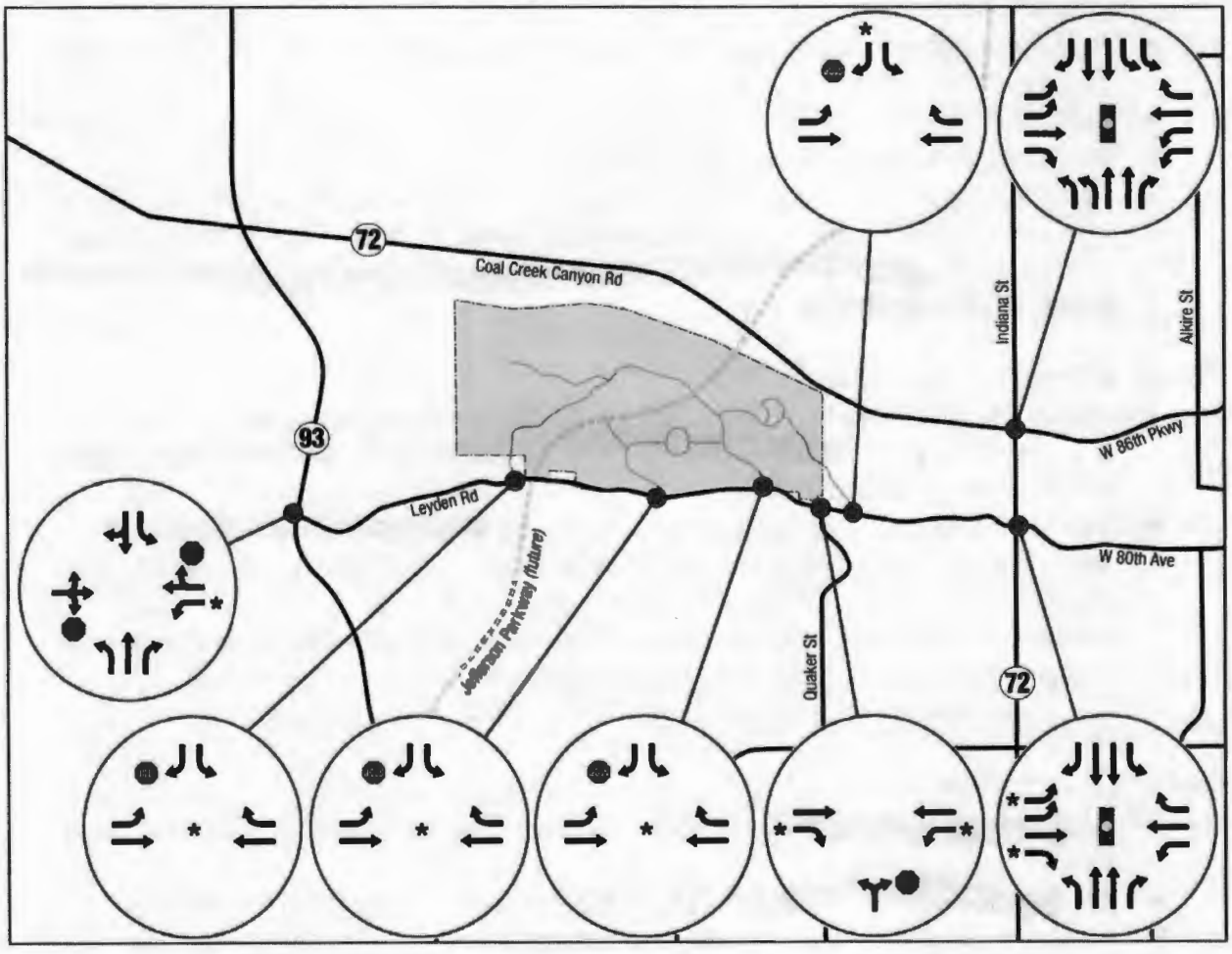
West 86th Parkway/Indiana Street

- In the short term build-out year, capacity improvements will be required at this intersection. When Indiana Street and West 86th Parkway are improved to four lanes and turn lane improvements are made, the intersection will operate adequately with the added site traffic.

Quaker Street/Leyden Road

- Quaker Street and Leyden Road will operate acceptably with the added site traffic upon build-out. Leyden Road left and right-turn auxiliary lanes should be added to improve the intersection to City standards. Under long-term conditions, the intersection will experience a failing northbound left turn movement and mitigation may be necessary long-term.

Figure 9
Future Intersection Control and Geometry



A. Auxiliary Turn Lanes

The Colorado State Highway Access Code and the City of Arvada Design Standards were followed to determine recommended auxiliary lane lengths within the study limits. Based on existing traffic volumes and CDOT requirements, several study area intersections currently have inadequate auxiliary lanes lengths. These movements, which will be utilized by site traffic, include:

- Leyden Road/Indiana Street northbound left turn
- SH 93/Leyden Road northbound right turn
- SH 93/Leyden Road southbound left turn

The auxiliary lane requirements for all movements proposed to be used by Leyden Rock traffic at state highway intersections are shown on Table 6. Leyden Road was considered to be equivalent to a NR-B classification for determining auxiliary lane improvements at the intersections shown below.

Table 6
Auxiliary Lane Recommendations

Intersection	Movement/ Approach	Roadway Classification	Link Speed (mph)	Existing Auxiliary Lane	Existing Deficient ?	2030 Required Storage	
						No Build Scenario	Build Scenario
Leyden Rd & SH 93	NBRT	E-X	55	400	Yes	n/a	n/a
	SBLT	E-X	55	570	Yes	90	260
	WBLT	NR-B	40	none	No	40	75
	WBRT accel	E-X	55	add lane	No	n/a	n/a
Leyden Rd & Indiana St	EBLT	NR-B	30	230	No	220	405*
	EBRT	NR-B	30	none	No	40	225
	NBLT	NR-A	50	85	Yes	50	255
	SBRT	NR-A	45	435	No	n/a	n/a
West 86th Parkway & Indiana St	NBRT	NR-A	45	435	No	n/a	n/a
	WBLT	NR-B	40	320	No	290	415*

**Movement recommended as dual left turn; therefore less storage will be required*

To determine the required improvements at the site accesses along Leyden Road, the CDOT requirements for a NR-B roadway and the City of Arvada requirements for auxiliary lane improvements on arterial streets were used. Both methods were computed, and whichever standard required a longer auxiliary lane was selected. For the site access to Leyden Ranch, and the eastern and central Leyden Rock accesses along Leyden Road, the City standard of 150' storage and 150' taper prevailed, so 300' right and left-turn auxiliary lanes are recommended. For the western Leyden Rock access, City standards of 300' for the eastbound left turn lane should be followed, and a westbound right-turn lane of 350' is recommended. If the addition of auxiliary lanes is required on Leyden Road at Quaker Street, the eastbound right-turn lane will be 300' and the westbound left-turn lane will be 350'.

The on-site roadways are recommended to construct 300' right-turn lanes at Leyden Road as well. The exception to this recommendation is for the central Leyden Rock access, which is proposed to be a minor collector and will operate at a LOS C or better in 2030 as a one-lane approach.

B. Future Intersection Signalization

A basic signal warrant analysis was performed for the morning and evening peak periods at the three intersections that are proposed to fail as unsignalized movements in the future:

- [redacted]
- [redacted]
- [redacted]

The AM and PM peak periods were evaluated for the Warrant 3: Peak Hour in the MUTCD signal warrants. Right-turning traffic was removed from the total approach traffic because those vehicles do not have to wait for approaching traffic.

According to the peak hour signal warrant analysis, it is likely that the warrant will be met at the intersection of Leyden Road and the Leyden Ranch intersection by 2030. If Leyden Road grows at less than a 3-percent annual rate, a signal may not be warranted.

Based on the peak hour signal warrant analysis, the intersection of SH 93 and Leyden Road will not meet signal warrants. It is possible, however, that other warrants may be met in the future due to the lack of available gaps for westbound left-turning traffic to enter the roadway. Another possible improvement would be to construct a westbound to southbound acceleration lane for left-turning traffic. If future travel patterns are altered because of the Jefferson Parkway and more traffic travels to/from SH 93 south, a signal may be warranted at this location.

The intersection of Leyden Road and Quaker Street [redacted] for signalization in the future. The northbound approach delay can be minimized if a right-turn auxiliary lane is constructed, but the left-turn traffic will still experience long delays due to minimal gaps in traffic. If a signal is constructed at the Leyden Ranch access, it would create gaps in traffic for northbound left-turning traffic at this location.

6

SUMMARY AND RECOMMENDATIONS

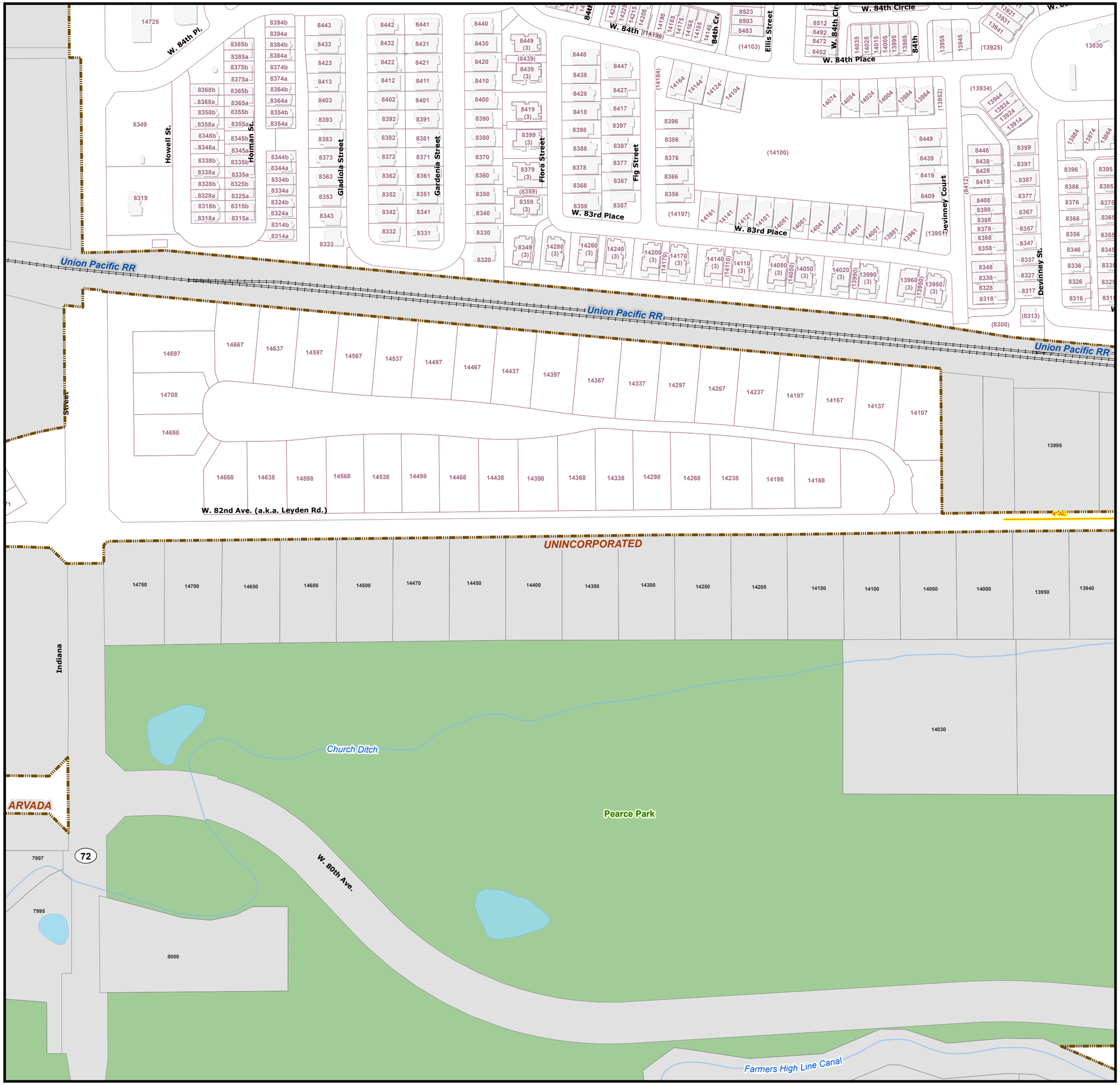
The following conclusions and recommendations summarize the findings of the analysis.

Leyden Rock is a residential development planned to be located in Arvada, Colorado. The land is located in Jefferson County and will be annexed to the City upon approval for development. The development will be located to the north of Leyden Road between SH 93 and Indiana Street. The land directly west of the site is a Jefferson County solid waste facility, and the land to the east of the site is also currently undeveloped but is planned to be developed as single-family homes as well. The development surrounds the Town of Leyden, which is located along the south side of Leyden Road.

Two parcels are being analyzed for traffic impacts to the roadway network. A total of 1,339 single family homes are proposed to be developed on the site. The project will be completed in multiple phases, but for purpose of analysis it was assumed the build-out year would be in 2013 and the horizon year analysis was performed for 2030.

Based on the analyses within the report, the following conclusions and recommendations were made:

- It is recommended right-turn and left-turn auxiliary lanes be constructed on Leyden Road at each site entrance.
- Right-turn lanes are recommended exiting the site at Leyden Ranch, the east Leyden Rock exit, and the west Leyden Rock exit.
- The intersection of Indiana Street and Leyden Road will require auxiliary lane improvements for the northbound left turn movement and an eastbound right-turn lane will need to be constructed.
- The Indiana Street and Leyden Road intersection will require additional capacity improvements, which can be accomplished by converting the eastbound left turn lane to a dual-left lane, or by converting the northbound left to a dual left turn lane. Either of these improvements will create an acceptable overall intersection LOS, but will require a short additional receiving lane on either northbound Indiana Street or westbound Leyden Road, respectively.
- A westbound left turn lane is recommended at the intersection of SH 93 and Leyden Road.
- The southbound left turn lane at SH 93 and Leyden Road will need to be extended.
- A westbound to southbound left turn auxiliary lane may be warranted at SH 93 and Leyden Road.
- The intersection of Leyden Road/Leyden Ranch site entrance, and SH 93/Leyden Road may warrant signalization in the long-term future depending on background traffic volumes.



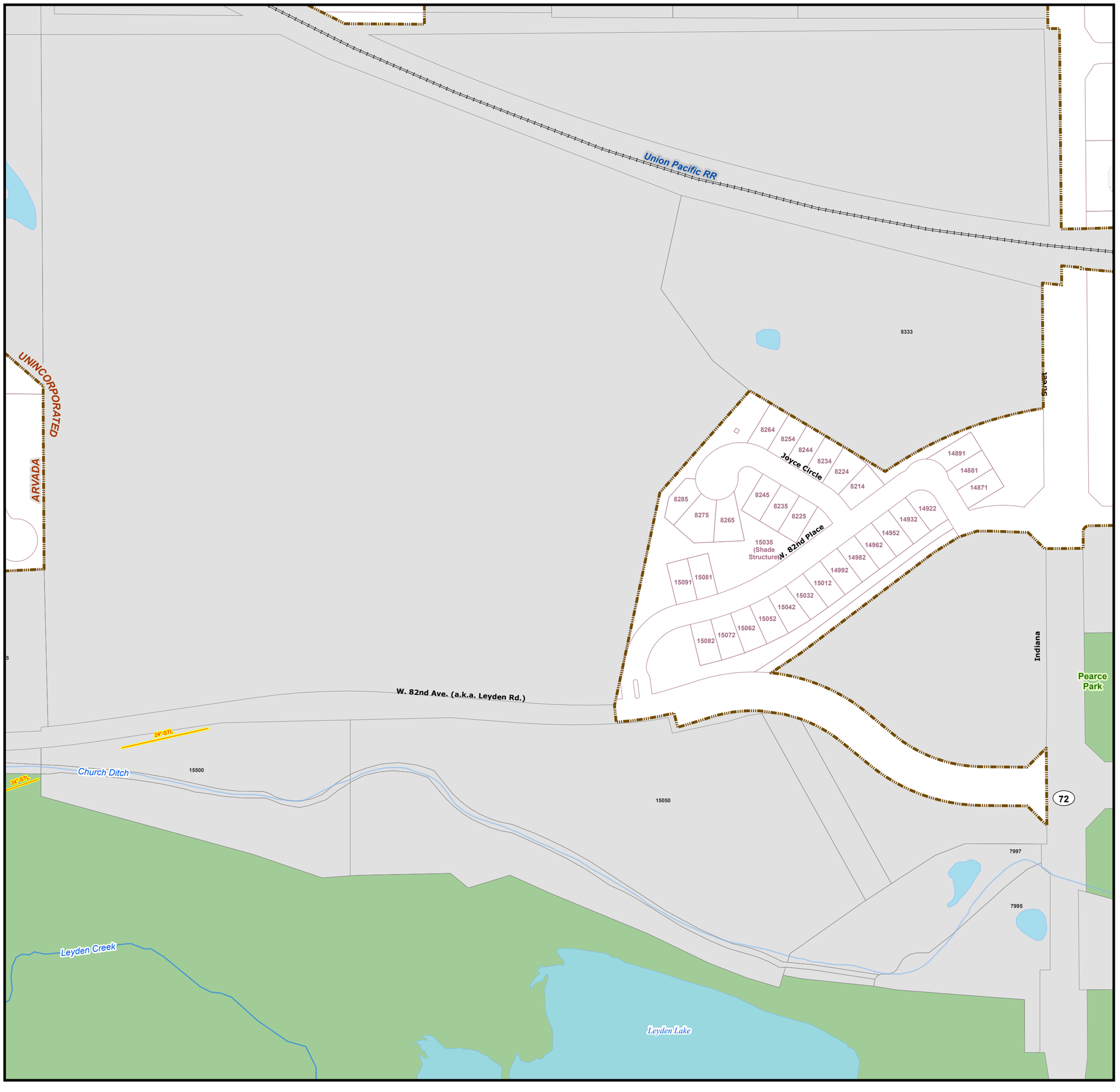
ABANDONED MAP

SW 1/4 SEC 3
T 2 S, R 69 W

MAP 160	MAP 145	MAP 130
MAP 159	MAP 144	MAP 129
MAP 158	MAP 143	MAP 128

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 159

- Mains and Laterals
- Casing
- Manholes
- LiftStation
- Clean Outs
- Storm Inlets
- Storm Culverts
- Irrigation Box
- Sewer Grease Traps
- Tracer Wire Box
- Fire Hydrants
- Sampling Station
- Air Valves
- CP Test Station
- Water Vaults
- Water Pump Station
- Water Tank

System Valve

- Blow Off/Gate
- Drain/Butterfly&Gate
- Gate
- Isolation/Ball
- Isolation/Butterfly
- Isolation/Globe
- Isolation/Wafer
- Special Use
- Zone Change/Gate
- Curbstop
- Altitude
- Check
- PRV
- Surge

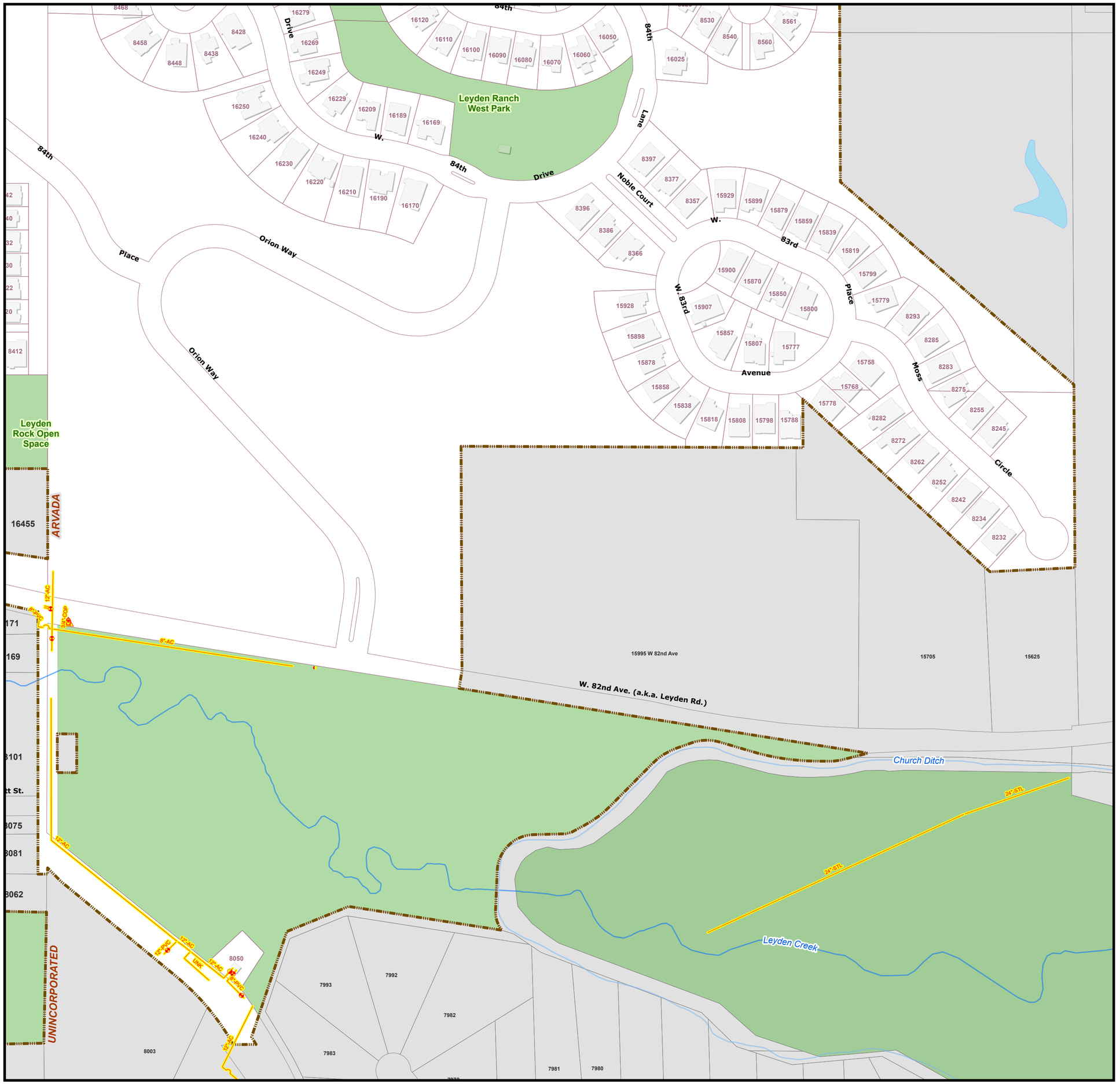
ABANDONED MAP

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 178	MAP 160	MAP 145
MAP 177	MAP 159	MAP 144
MAP 176	MAP 158	MAP 143

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 177

- Mains and Laterals
- Casing
- Manholes
- LiftStation
- Clean Outs
- Storm Inlets
- Storm Culverts
- Irrigation Box
- Sewer Grease Traps
- Tracer Wire Box
- Fire Hydrants
- Sampling Station
- Air Valves
- CP Test Station
- Water Vaults
- Water Pump Station
- Water Tank

System Valve

- Blow Off/Gate
- Drain/Butterfly&Gate
- Gate
- Isolation/Ball
- Isolation/Butterfly
- Isolation/Globe
- Isolation/Wafer
- Special Use
- Zone Change/Gate
- Curbstop
- Altitude
- Check
- PRV
- Surge

ABANDONED MAP

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 196	MAP 178	MAP 160
MAP 195	MAP 177	MAP 159
MAP 194	MAP 176	MAP 158

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 195

- Mains and Laterals
- Casing
- Manholes
- LiftStation
- Clean Outs
- Storm Inlets
- Storm Culverts
- Irrigation Box
- Sewer Grease Traps
- Tracer Wire Box
- Fire Hydrants
- Sampling Station
- Air Valves
- CP Test Station
- Water Vaults
- Water Pump Station
- Water Tank

System Valve

- Blow Off/Gate
- Drain/Butterfly&Gate
- Gate
- Isolation/Ball
- Isolation/Butterfly
- Isolation/Globe
- Isolation/Wafer
- Special Use
- Zone Change/Gate
- Curbstop
- Altitude
- Check
- PRV
- Surge

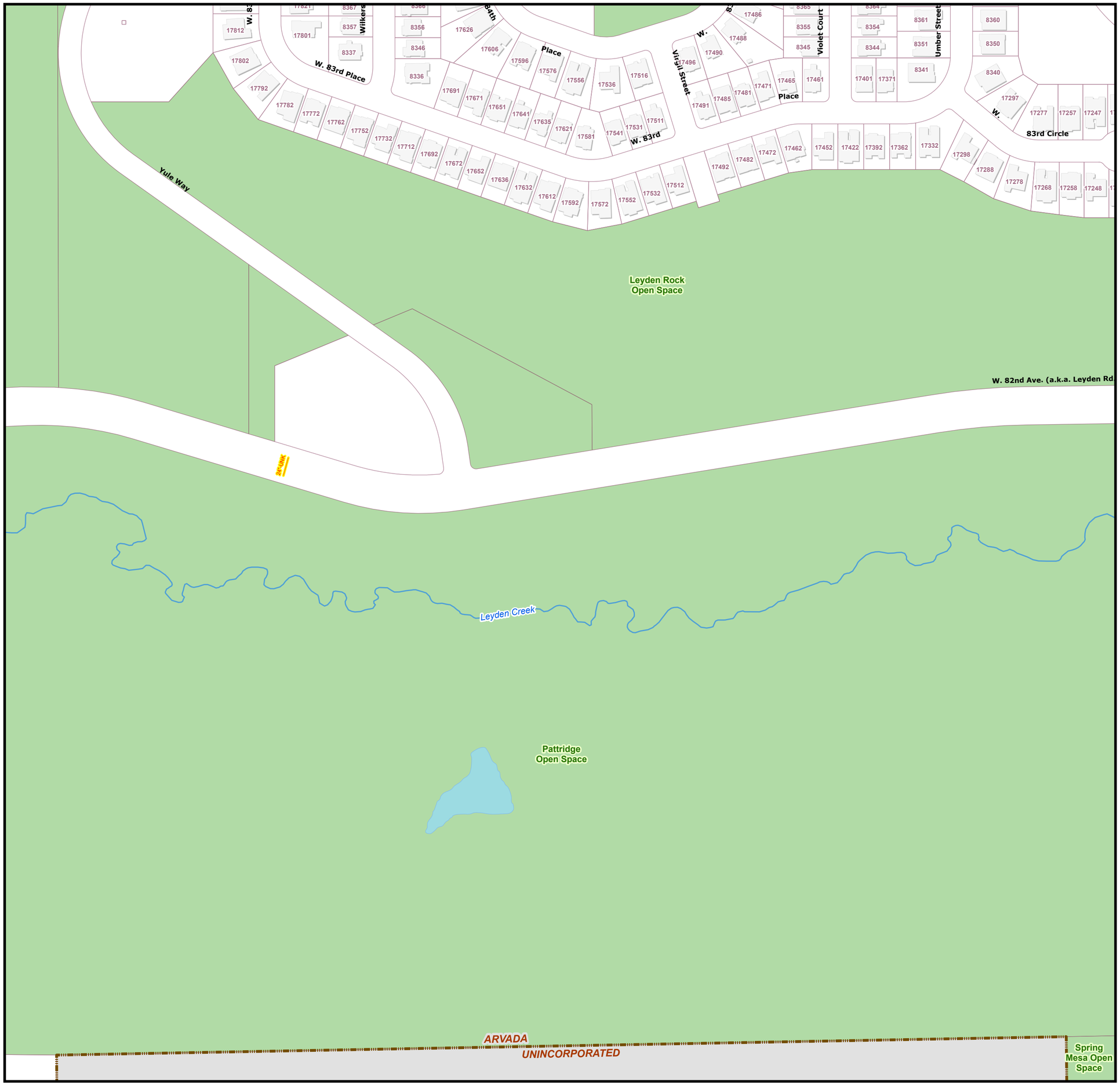
ABANDONED MAP

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 214	MAP 196	MAP 178
MAP 213	MAP 195	MAP 177
MAP 212	MAP 194	MAP 176

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 213

- Mains and Laterals
- Casing
- Manholes
- LiftStation
- Clean Outs
- Storm Inlets
- Storm Culverts
- Irrigation Box
- Sewer Grease Traps
- Tracer Wire Box
- Fire Hydrants
- Sampling Station
- Air Valves
- CP Test Station
- Water Vaults
- Water Pump Station
- Water Tank

System Valve

- Blow Off/Gate
- Drain/Butterfly&Gate
- Gate
- Isolation/Ball
- Isolation/Butterfly
- Isolation/Globe
- Isolation/Wafer
- Special Use
- Zone Change/Gate
- Curbstop
- Altitude
- Check
- PRV
- Surge

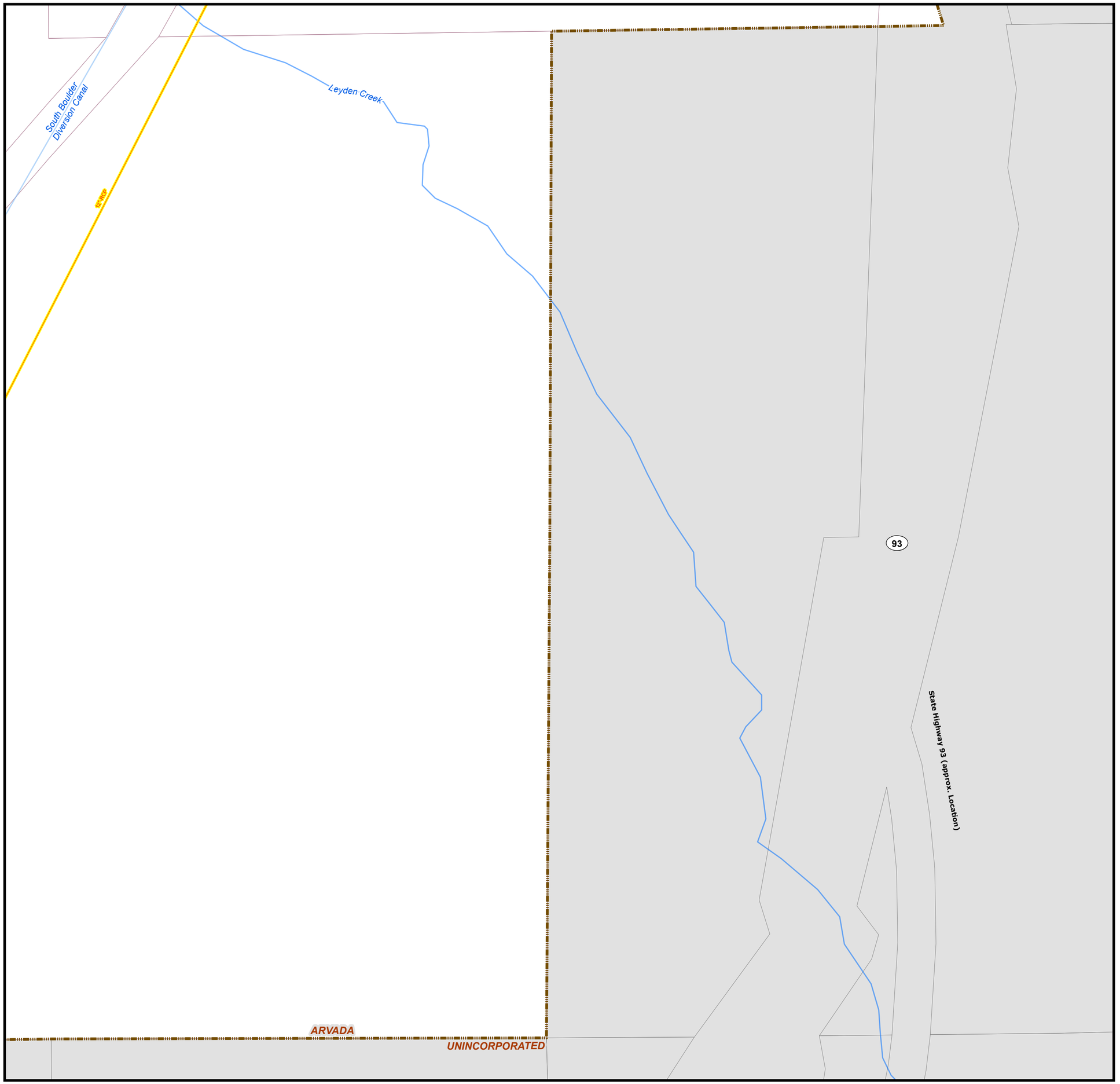
ABANDONED MAP

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 232	MAP 214	MAP 196
MAP 231	MAP 213	MAP 195
MAP 230	MAP 212	MAP 194

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

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Feet

MAP PAGE 277

- Mains and Laterals
- Casing
- Manholes
- LiftStation
- Clean Outs
- Storm Inlets
- Storm Culverts
- Irrigation Box
- Sewer Grease Traps
- Tracer Wire Box
- Fire Hydrants
- Sampling Station
- Air Valves
- CP Test Station
- Water Vaults
- Water Pump Station
- Water Tank

System Valve

- Blow Off/Gate
- Drain/Butterfly&Gate
- Gate
- Isolation/Ball
- Isolation/Butterfly
- Isolation/Globe
- Isolation/Wafer
- Special Use
- Zone Change/Gate
- Curbstop
- Altitude
- Check
- PRV
- Surge

ABANDONED MAP

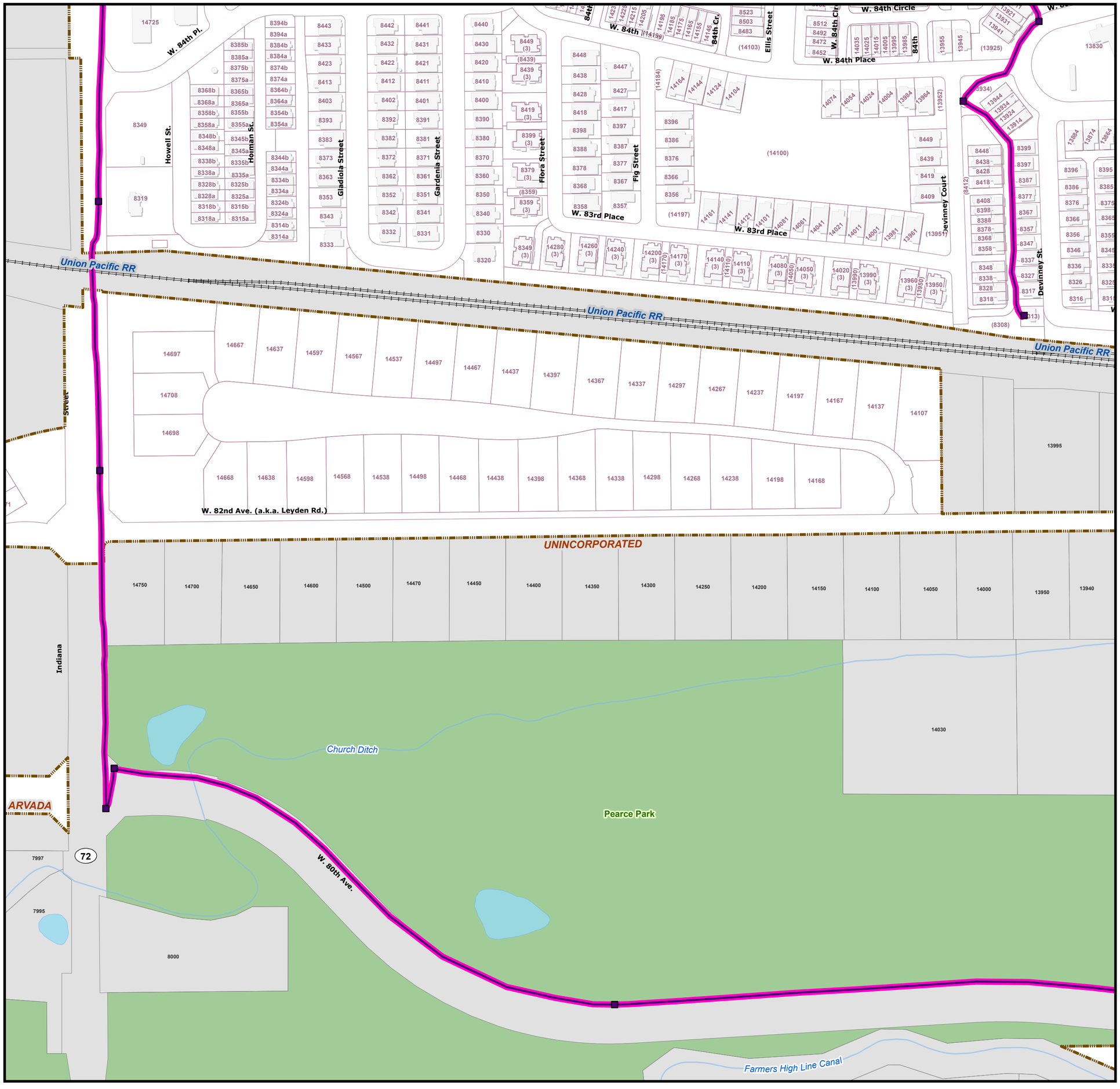
NW 1/4 SEC 2
T 2 S, R 70 W

MAP 291	MAP 278	MAP 265
MAP 290	MAP 277	MAP 264
MAP 289	MAP 276	MAP 263

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025

MAP PAGE 144



Communication Network

- Access Point
- Traffic Cabinets
- Wireless Path
- SCADA
- Tower
- Wireless Site
- City Facilities
- Fire Stations
- Schools
- School Flashers

Signal Assets

- Fire Signal
- Traffic Signal

Active Conduit by Owner

Owned By

- ARFD
- Arvada
- CDOT; JeffCo Schools
- JFON; ZAYO
- Other
- Gaps
- Ready For Mapping

Fiber Path

- Conduit
- Overhead; In Building

Other Utility Lines

- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Map_Grid

FIBER MAPS

SW 1/4 SEC 3
T 2 S, R 69 W

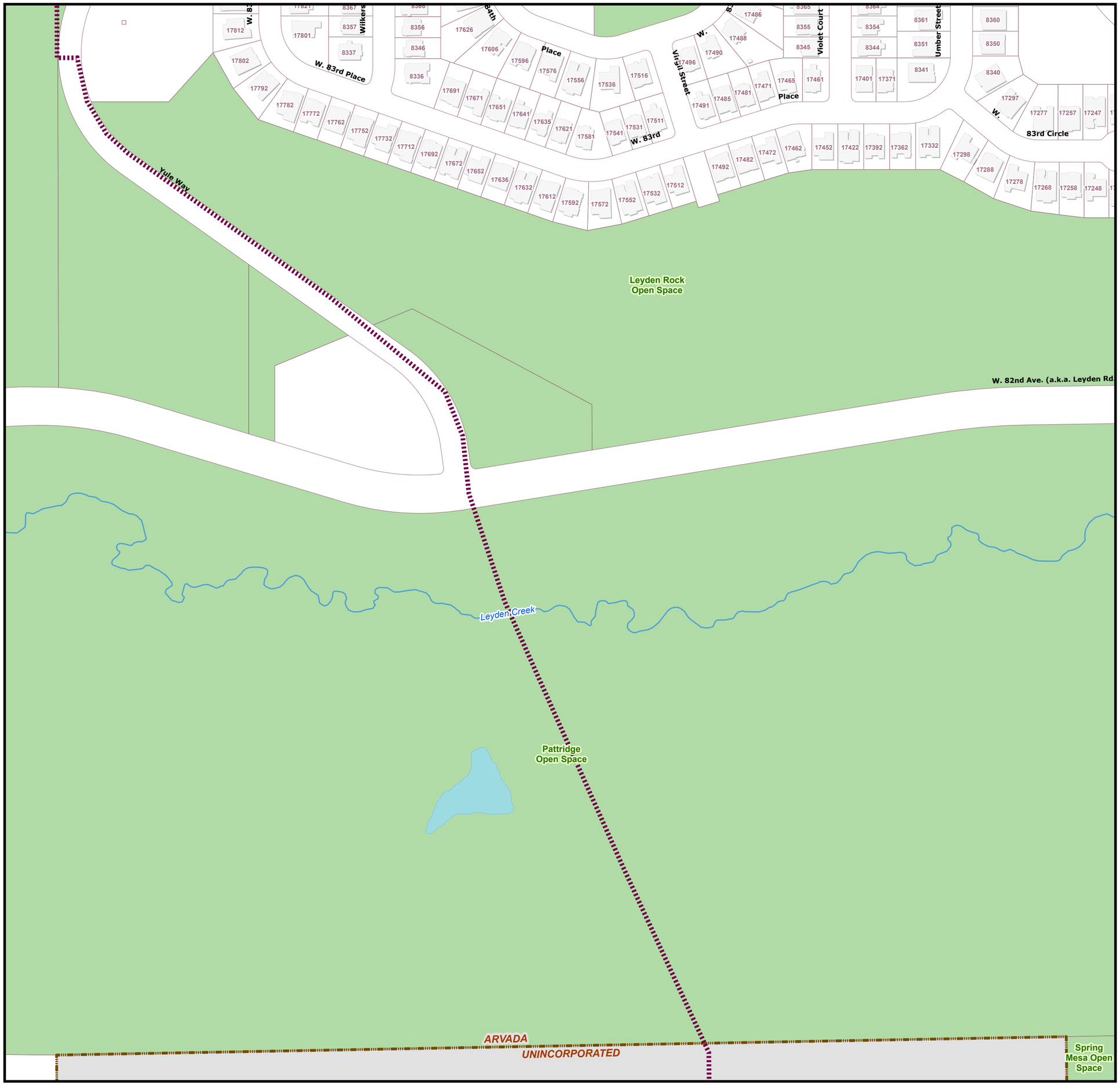
MAP 160	MAP 145	MAP 130
MAP 159	MAP 144	MAP 129
MAP 158	MAP 143	MAP 128

0 100 200 300 400
Feet

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025

MAP PAGE 213



Communication Network

- Access Point
- Traffic Cabinets
- Wireless Path
- SCADA
- Tower
- Wireless Site
- City Facilities
- Fire Stations
- Schools
- School Flashers

Signal Assets

- Fire Signal
- Traffic Signal

Active Conduit by Owner

Owned By

- ARFD
- Arvada
- CDOT; JeffCo Schools
- JFON; ZAYO
- Other
- Gaps
- Ready For Mapping

Fiber Path

- Conduit
- Overhead; In Building

Other Utility Lines

- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Map_Grid

FIBER MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 232	MAP 214	MAP 196
MAP 231	MAP 213	MAP 195
MAP 230	MAP 212	MAP 194

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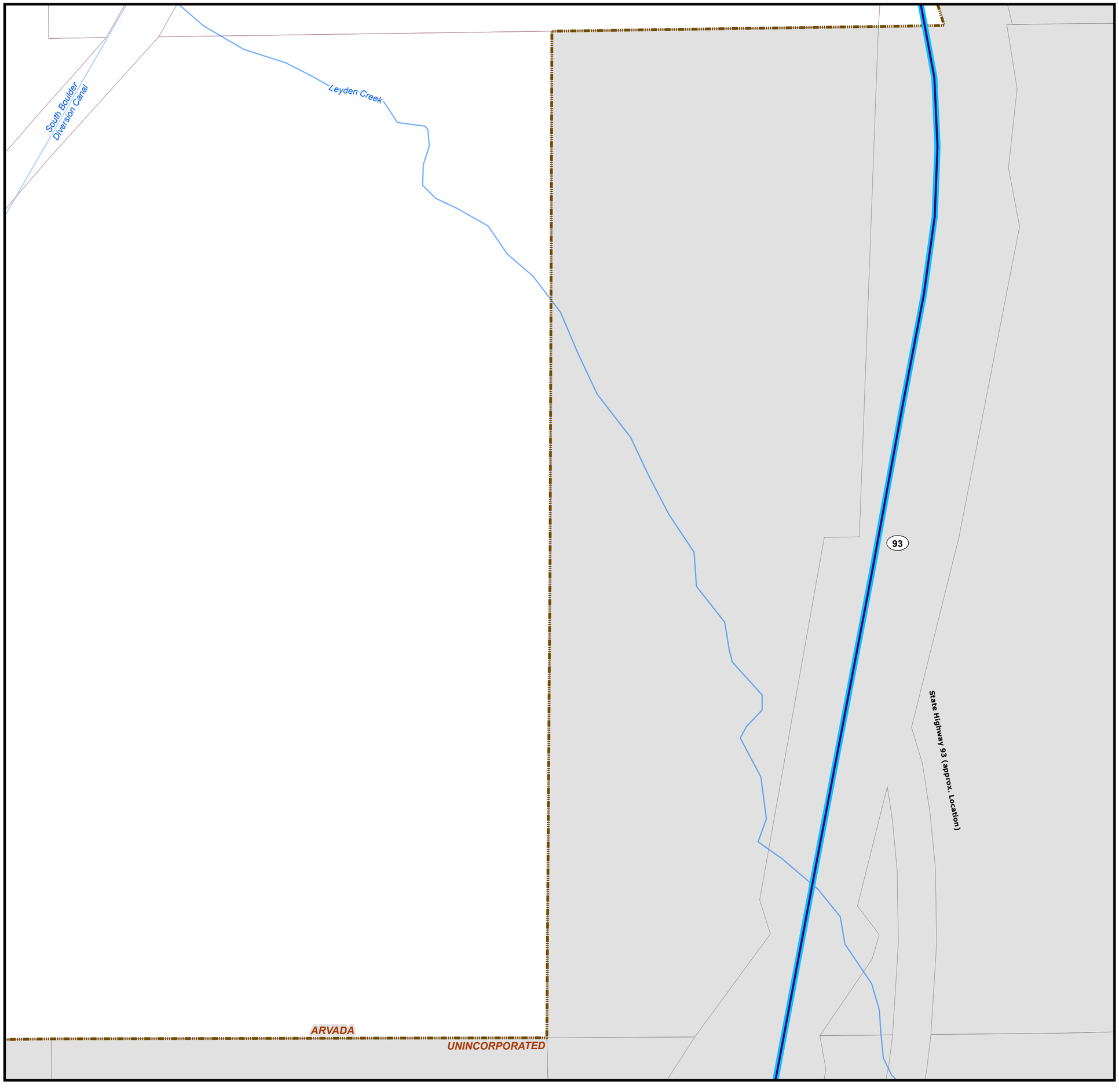
Feet

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025

MAP PAGE 277



NORTH

Communication Network

- Access Point
- Traffic Cabinets
- Wireless Path
- SCADA
- Tower
- Wireless Site
- City Facilities
- Fire Stations
- Schools
- School Flashers

Signal Assets

- Fire Signal
- Traffic Signal

Active Conduit by Owner

Owned By

- ARFD
- Arvada
- CDOT; JeffCo Schools
- JFON; ZAYO
- Other
- Gaps
- Ready For Mapping

Fiber Path

- Conduit
- Overhead; In Building

Other Utility Lines

- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Map_Grid

FIBER MAPS

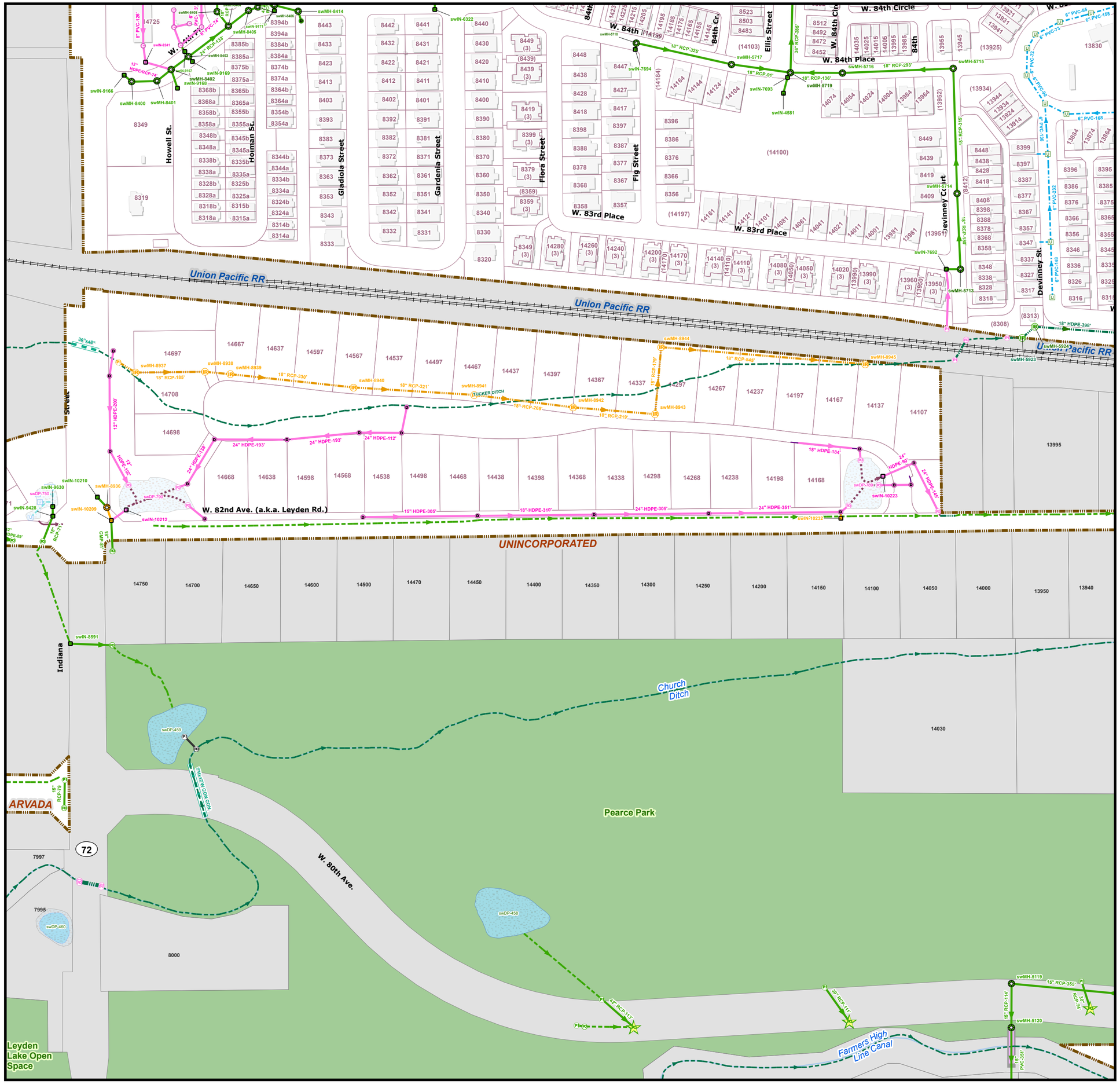
NW 1/4 SEC 2
T 2 S, R 70 W

MAP 291	MAP 278	MAP 265
MAP 290	MAP 277	MAP 264
MAP 289	MAP 276	MAP 263

0 100 200 300 400
Feet

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025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W. 83rd Place
W. 82nd Ave. (a.k.a. Leyden Rd.)
W. 80th Ave.
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Holman St.
Gladiola Street
Gardenia Street
Flora Street
Fig Street
Ellis Street
Devinney St.
Indiana
Church Ditch
Farmers High Line Canal
Pearce Park
Leyden Lake Open Space
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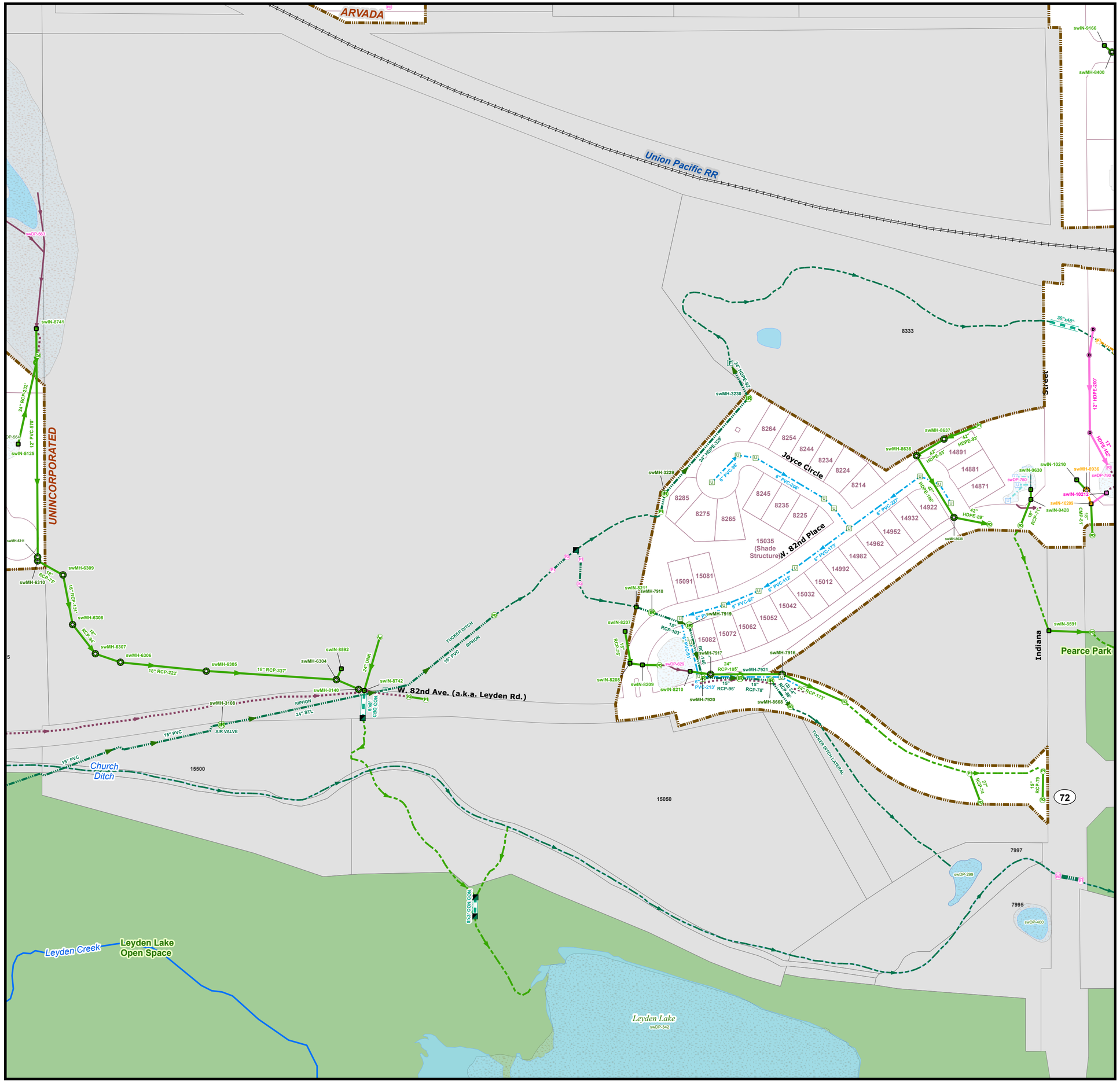


NORTH

0 100 200 300 400

Feet

MAP PAGE 159

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
- Pipe In - Active
- Pipe Out - Active
- Pipe End - Type Unknown

Structures
- Irrigation Box
- Head Gate / Head Wall
- Ceptor
- Flume
- Omni Ball
- Storm Gauge
- Water Quality / Well

Mains and Open Drains
- Active
- Non City
- Private
- Under Const
- Irrigation
- Irrigation Ditch
- Outfall
- Storm Ditch
- Chase
- Swale
- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

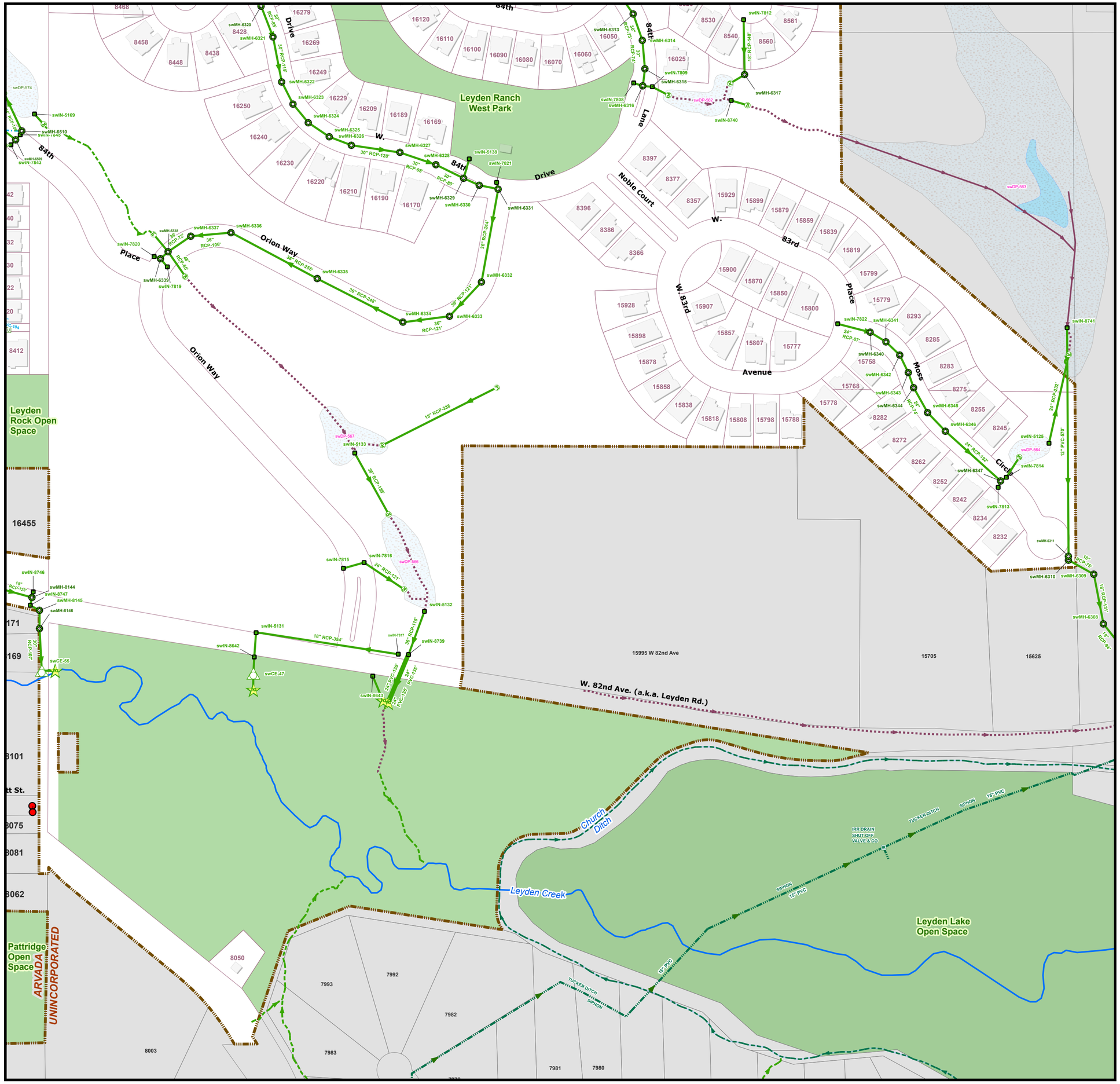
STORM MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 178	MAP 160	MAP 145
MAP 177	MAP 159	MAP 144
MAP 176	MAP 158	MAP 143

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



MAP PAGE 177

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
- Pipe In - Active
- Pipe Out - Active
- Pipe End - Type Unknown

Structures
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- Ceptor
- Flume
- Omni Ball
- Storm Gauge
- Water Quality / Well

Mains and Open Drains
- Active
- Non City
- Private
- Under Const
- Irrigation
- Irrigation Ditch
- Outfall
- Storm Ditch
- Chase
- Swale
- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

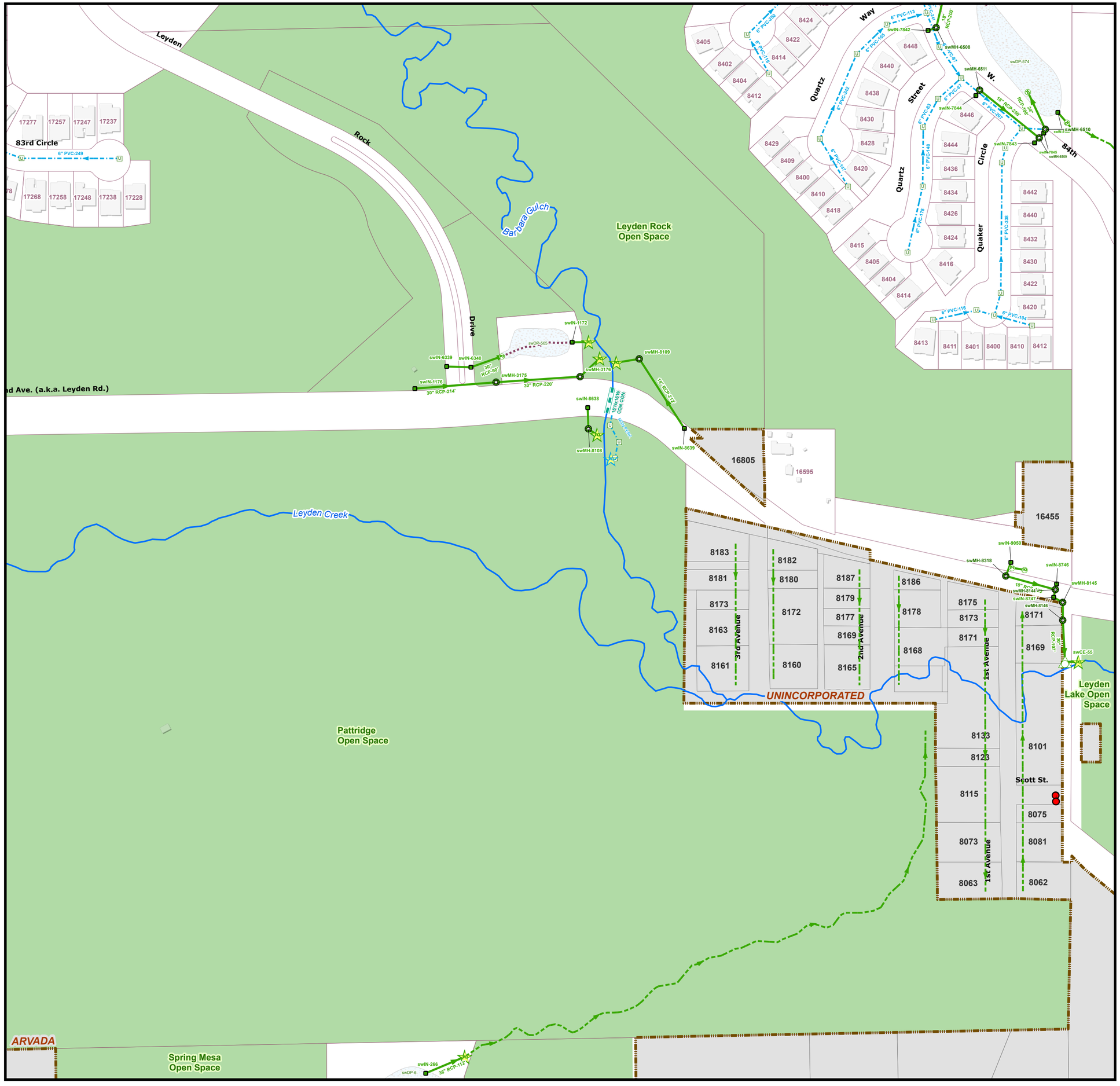
STORM MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 196	MAP 178	MAP 160
MAP 195	MAP 177	MAP 159
MAP 194	MAP 176	MAP 158

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 195

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
- Pipe In - Active
- Pipe Out - Active
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Structures
- Irrigation Box
- Head Gate / Head Wall
- Ceptor
- Flume
- Omni Ball
- Storm Gauge
- Water Quality / Well

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- Active
- Non City
- Private
- Under Const
- Irrigation
- Irrigation Ditch
- Outfall
- Storm Ditch
- Chase
- Swale
- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

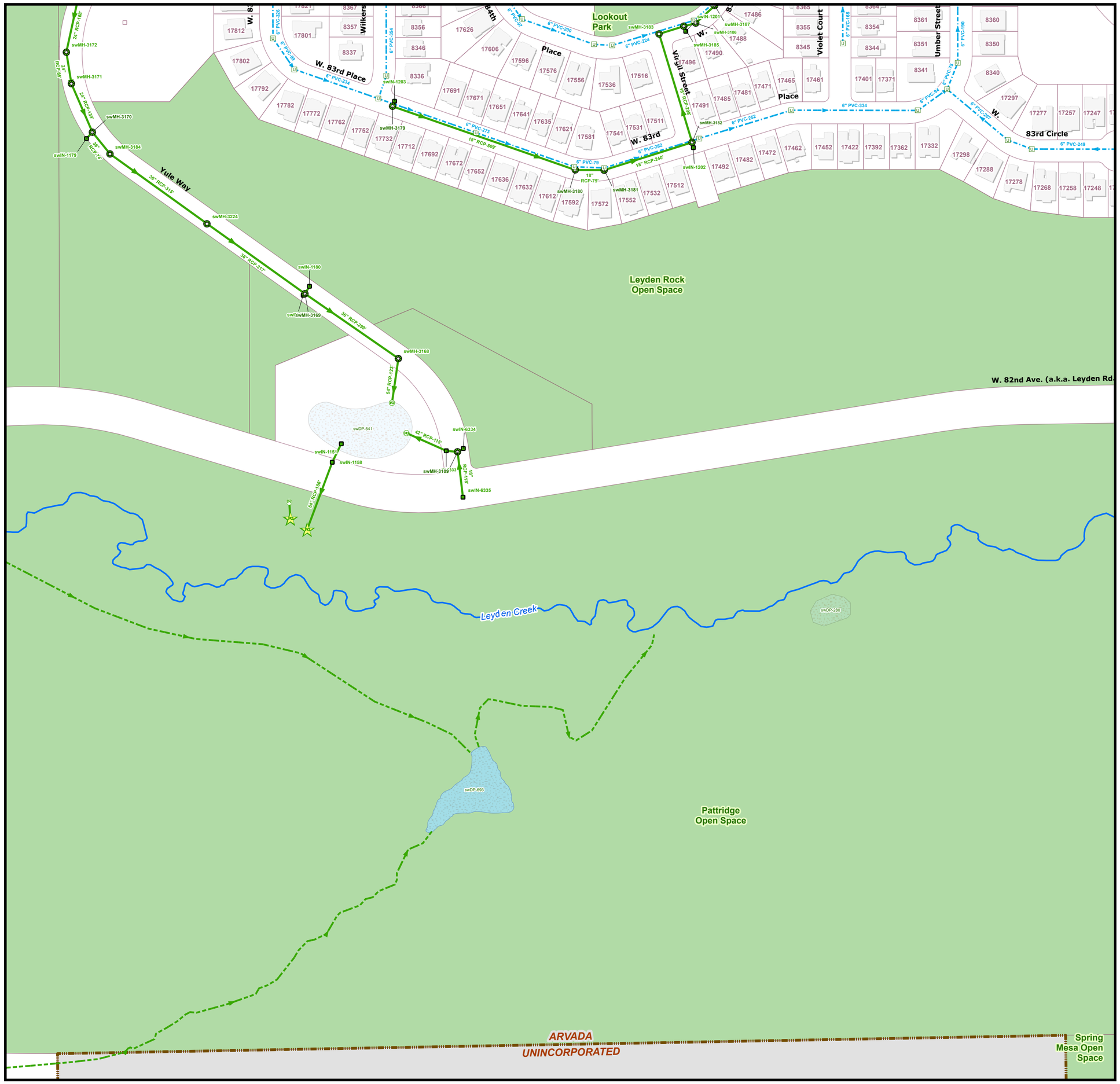
STORM MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 214	MAP 196	MAP 178
MAP 213	MAP 195	MAP 177
MAP 212	MAP 194	MAP 176

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



0 100 200 300 400
Feet

MAP PAGE 213

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
- Pipe In - Active
- Pipe Out - Active
- Pipe End - Type Unknown

Structures
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- Ceptor
- Flume
- Omni Ball
- Storm Gauge
- Water Quality / Well

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- Non City
- Private
- Under Const
- Irrigation
- Irrigation Ditch
- Outfall
- Storm Ditch
- Chase
- Swale
- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

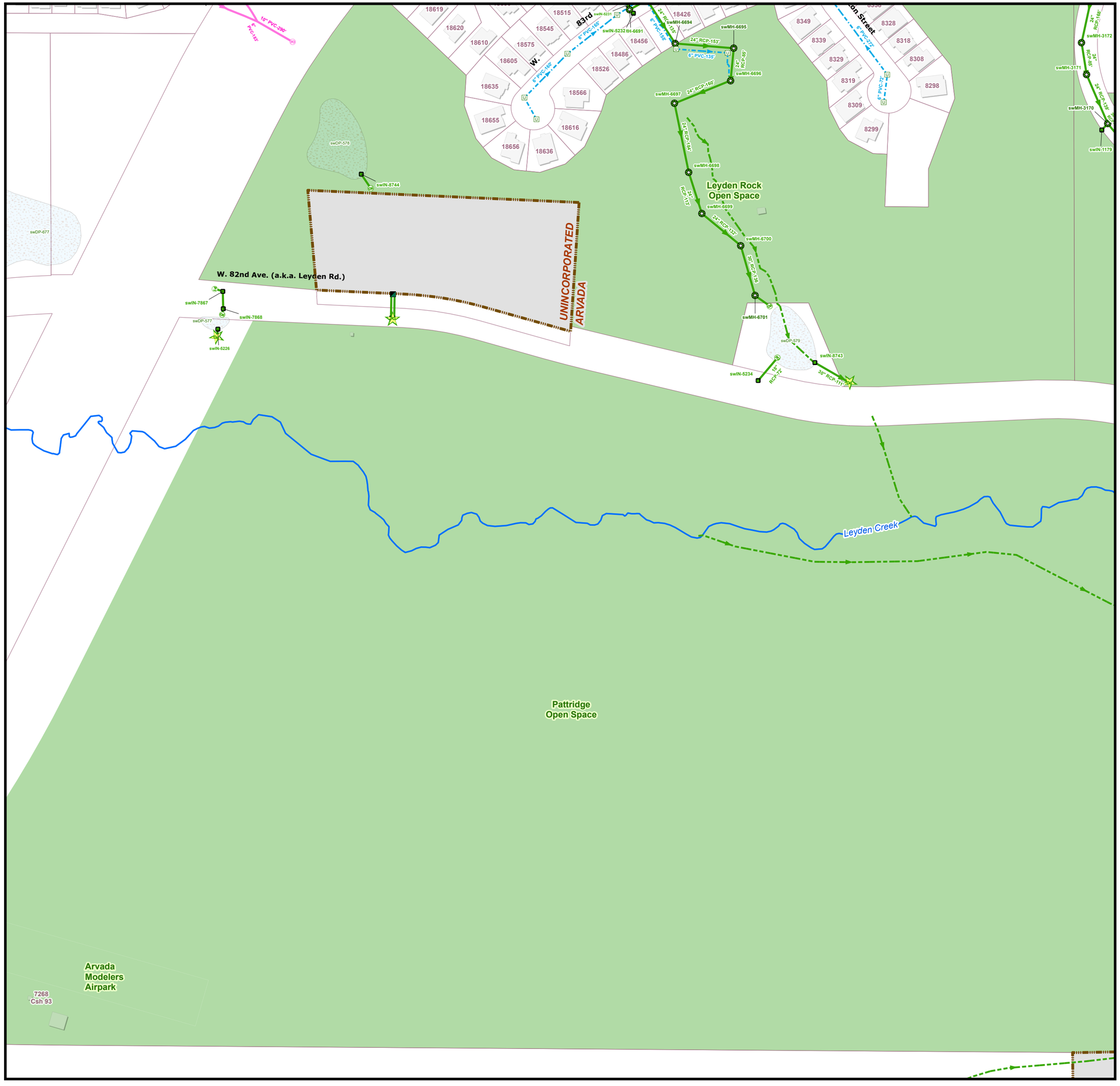
STORM MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 232	MAP 214	MAP 196
MAP 231	MAP 213	MAP 195
MAP 230	MAP 212	MAP 194

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



0 100 200 300 400

Feet

MAP PAGE 231

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

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- Irrigation
- Under Drain
- Non City

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- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

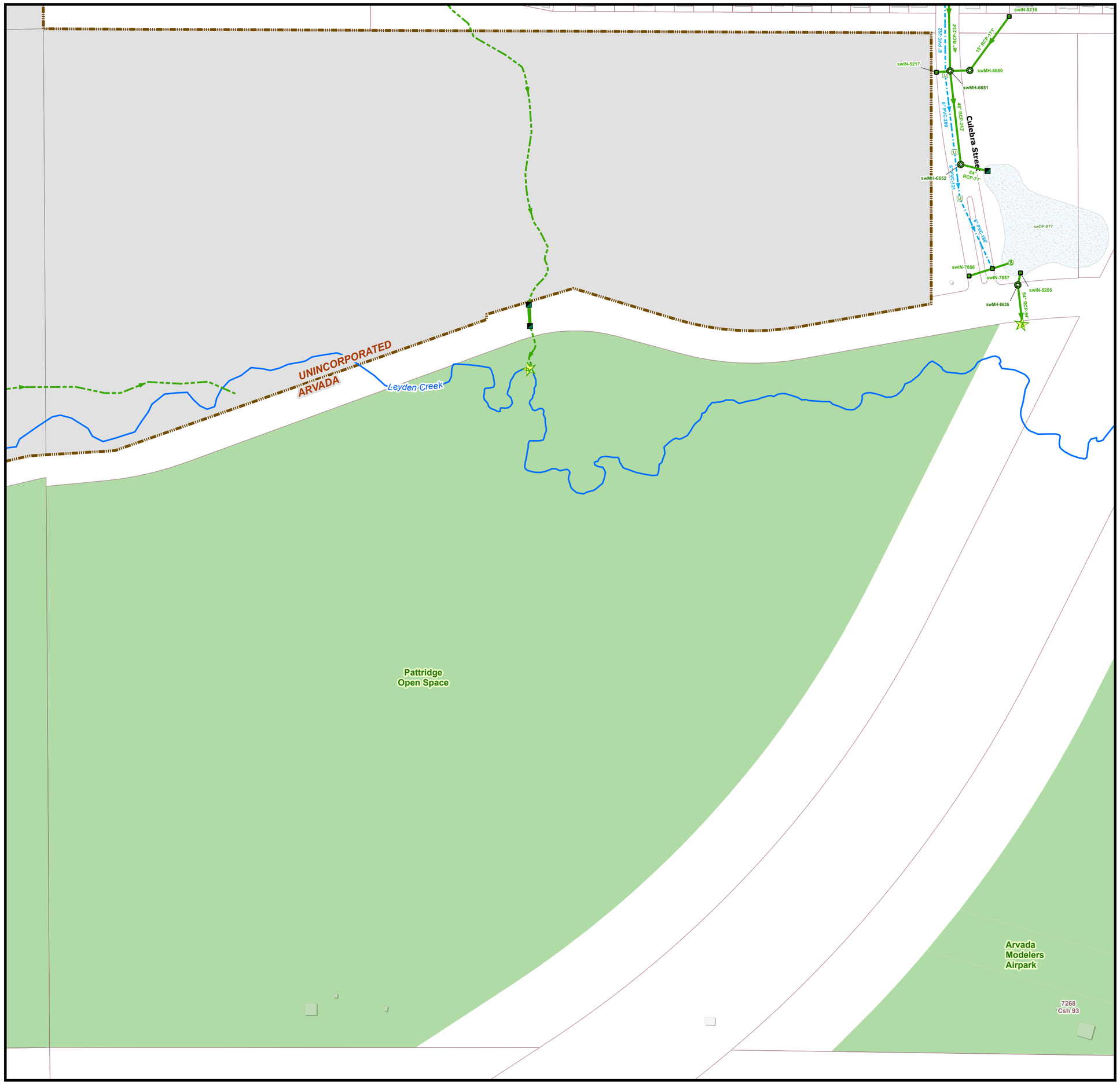
STORM MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 251	MAP 232	MAP 214
MAP 250	MAP 231	MAP 213
MAP 249	MAP 230	MAP 212

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 250

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
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- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

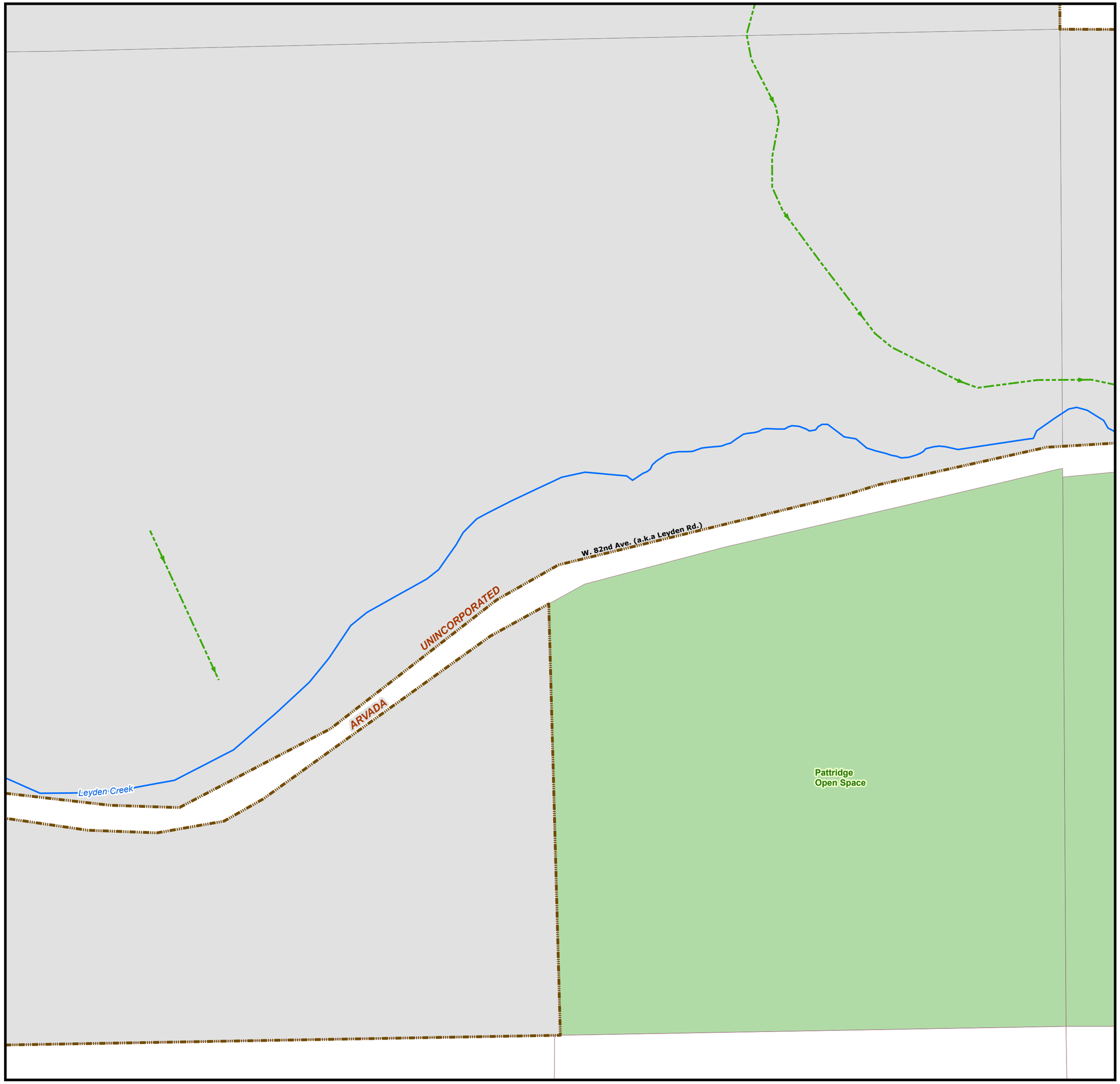
STORM MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 264	MAP 251	MAP 232
MAP 263	MAP 250	MAP 231
MAP 262	MAP 249	MAP 230

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 263

Manholes
- Storm, Active
- Storm, Under Construction
- Storm, Private
- Storm, Non City
- Irrigation
- Under Drain

Inlets
- Active
- Under Construction
- Private
- Non City

Pipe Outfalls
- Storm
- Irrigation
- Under Drain
- Non City

Pipe Ends
- Pipe In - Active
- Pipe Out - Active
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Structures
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- Head Gate / Head Wall
- Ceptor
- Flume
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- Private
- Under Const
- Irrigation
- Irrigation Ditch
- Outfall
- Storm Ditch
- Chase
- Swale
- Casing
- Storm Culvert
- Creek / Canal
- Storm Detention

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line

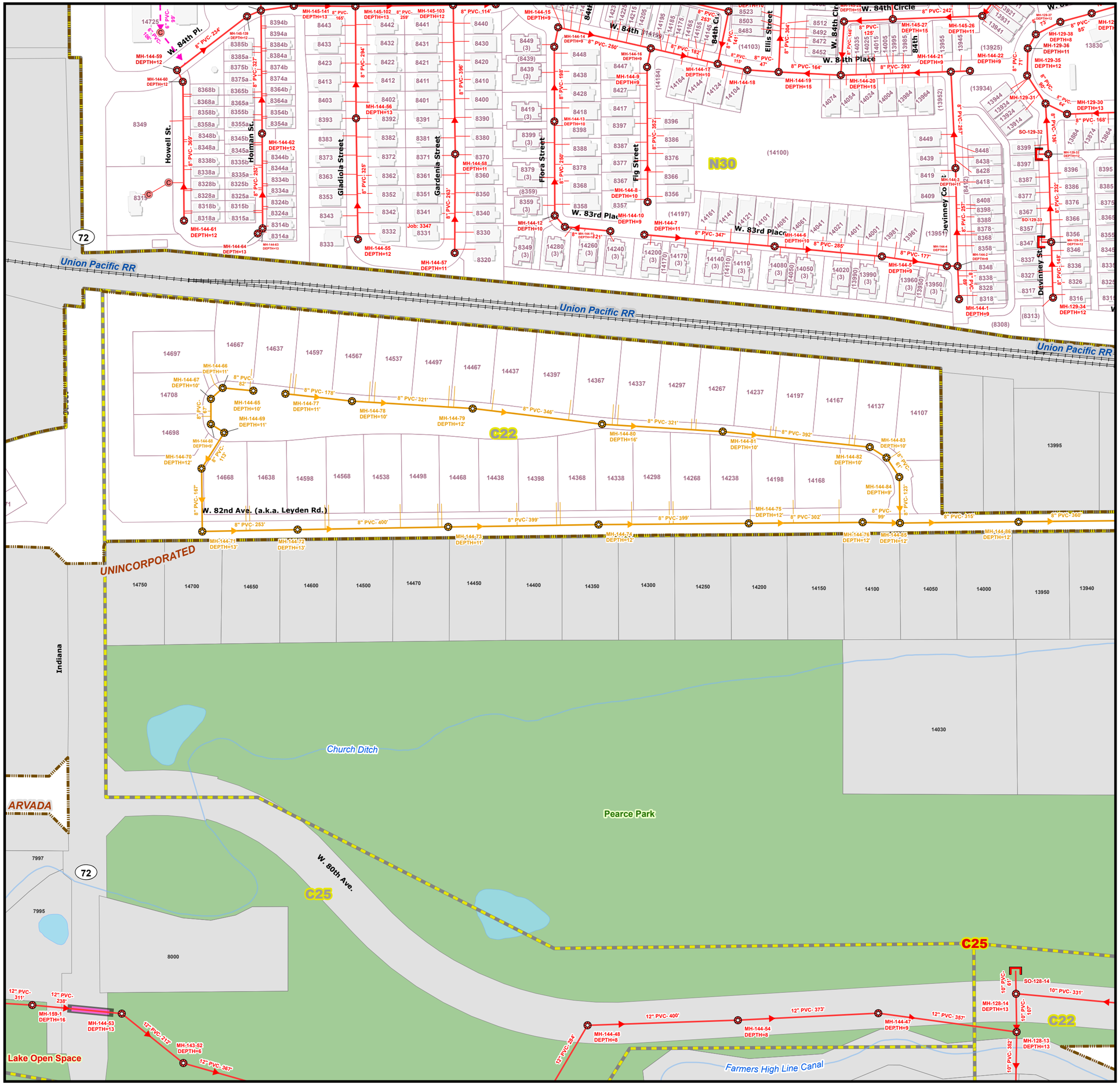
STORM MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 277	MAP 264	MAP 251
MAP 276	MAP 263	MAP 250
MAP 275	MAP 262	MAP 249

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 144

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
- Other Network Structures
- Clean Out
- Lift Station
- Sanitary Pump

Meter Station
- Active
- Non City

Grease Traps
- Active
- Non City

Fittings
- Plug; Stub Out

Gravity Mains
- Active
- Under Construction
- Private
- Non City

Pressurized Main
- Active
- Private
- Under Const

Lateral Lines
- Active
- Under Construction
- Casing

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Asset Group

Trouble Spots
- Monthly
- Tri-Monthly
- Low Pressure Area

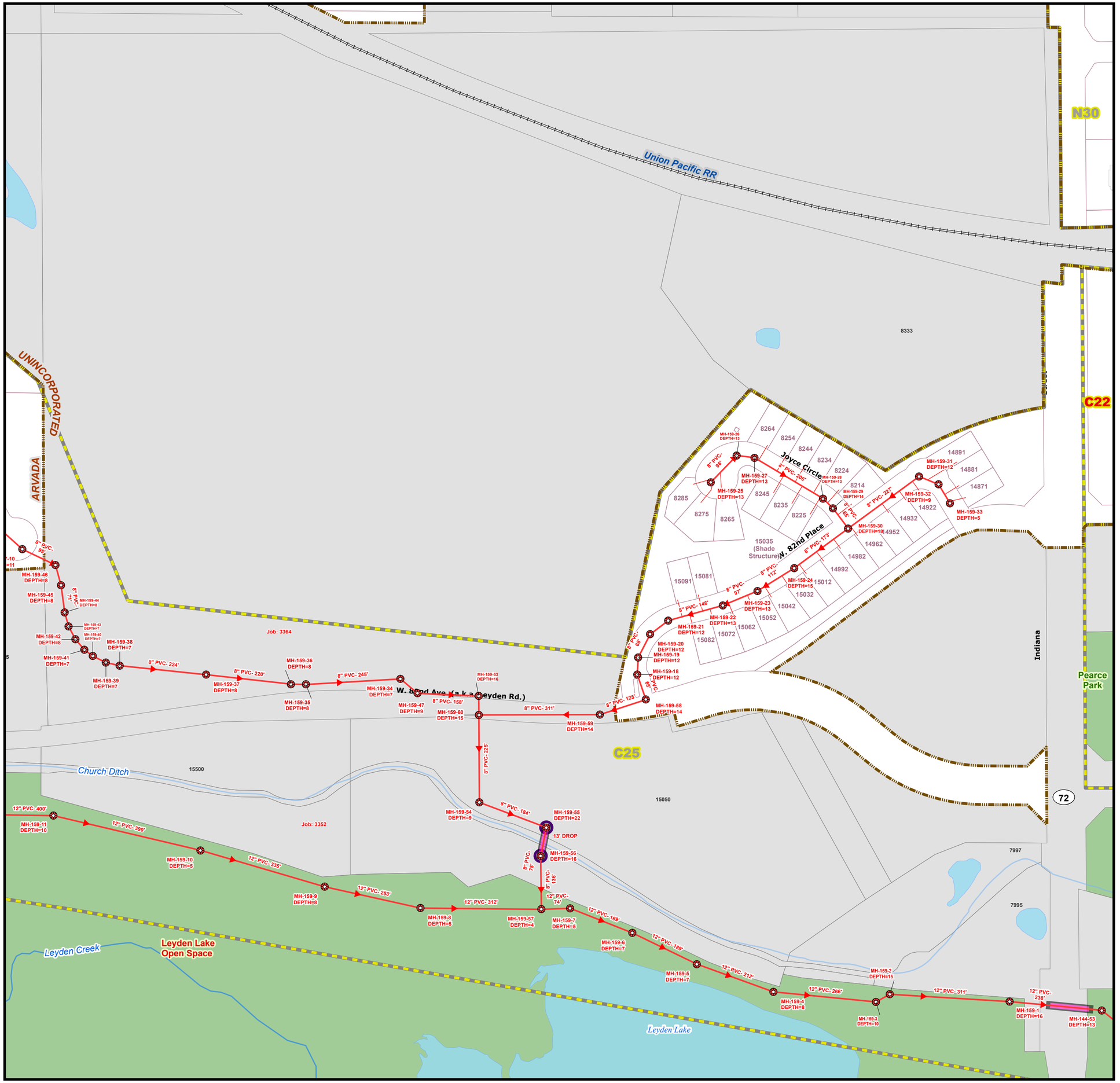
SEWER MAPS

SW 1/4 SEC 3
T 2 S, R 69 W

MAP 160	MAP 145	MAP 130
MAP 159	MAP 144	MAP 129
MAP 158	MAP 143	MAP 128

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 159

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
- Other Network Structures
- Clean Out
- Lift Station
- Sanitary Pump

Meter Station
- Active
- Non City

Grease Traps
- Active
- Non City

Fittings
- Plug; Stub Out

Gravity Mains
- Active
- Under Construction
- Private
- Non City

Pressurized Main
- Active
- Private
- Under Const

Lateral Lines
- Active
- Under Construction
- Casing

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Asset Group

Trouble Spots
- Monthly
- Tri-Monthly
- Low Pressure Area

SEWER MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 178	MAP 160	MAP 145
MAP 177	MAP 159	MAP 144
MAP 176	MAP 158	MAP 143

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025

MAP PAGE 177

NORTH

0 100 200 300 400

Feet

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
- Other Network Structures
- Clean Out
- Lift Station
- Sanitary Pump

Meter Station
- Active
- Non City

Grease Traps
- Active
- Non City

Fittings
- Plug; Stub Out

Gravity Mains
- Active
- Under Construction
- Private
- Non City

Pressurized Main
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- Private
- Under Const

Lateral Lines
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- Under Construction
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Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Asset Group

Trouble Spots
- Monthly
- Tri-Monthly
- Low Pressure Area

SEWER MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

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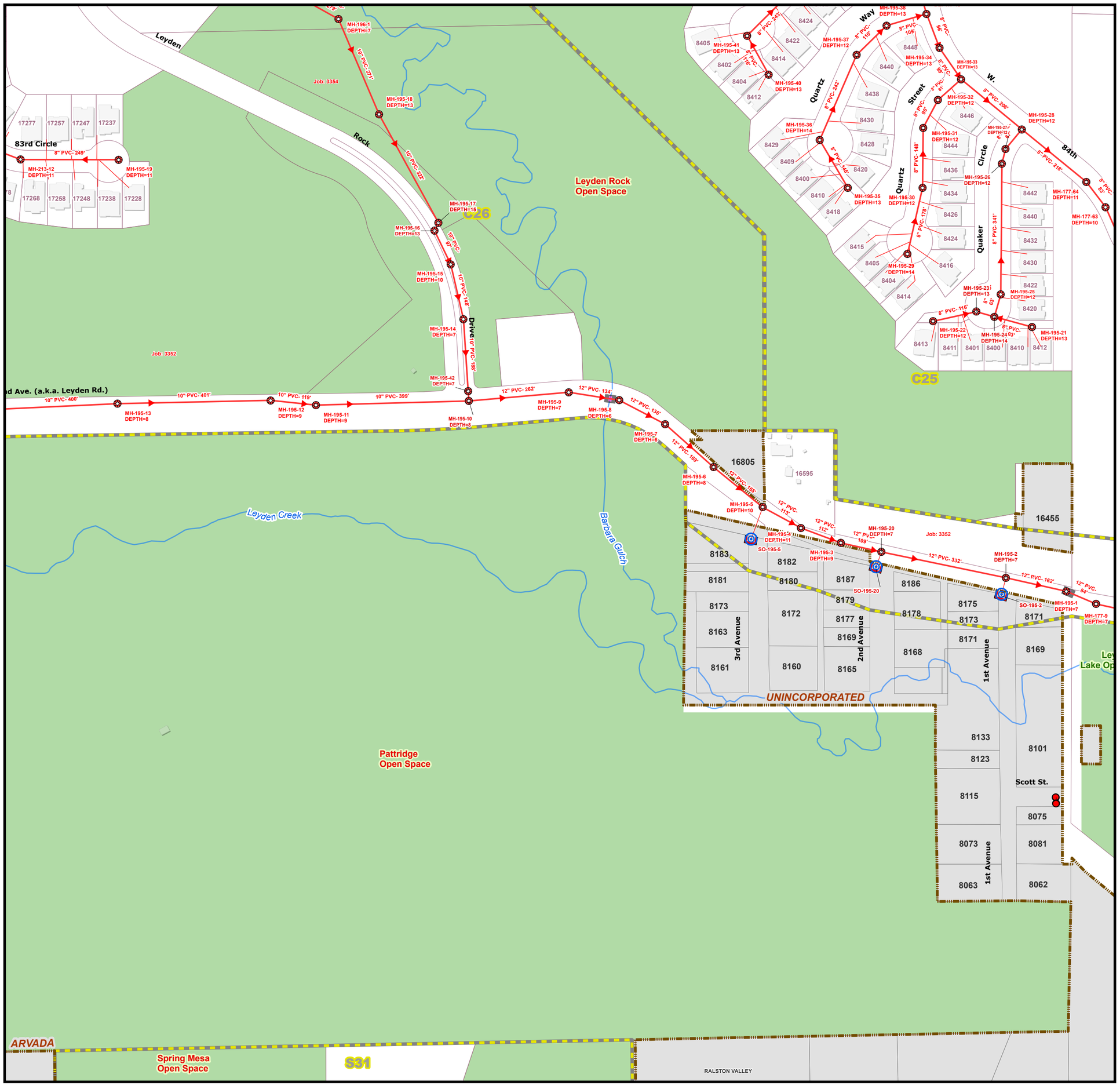
MAP 195	MAP 177	MAP 159
MAP 194	MAP 176	MAP 158

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



MAP PAGE 195

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
- Other Network Structures
- Clean Out
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- Sanitary Pump

Meter Station
- Active
- Non City

Grease Traps
- Active
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Fittings
- Plug; Stub Out

Gravity Mains
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Lateral Lines
- Active
- Under Construction
- Casing

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Asset Group

Trouble Spots
- Monthly
- Tri-Monthly
- Low Pressure Area

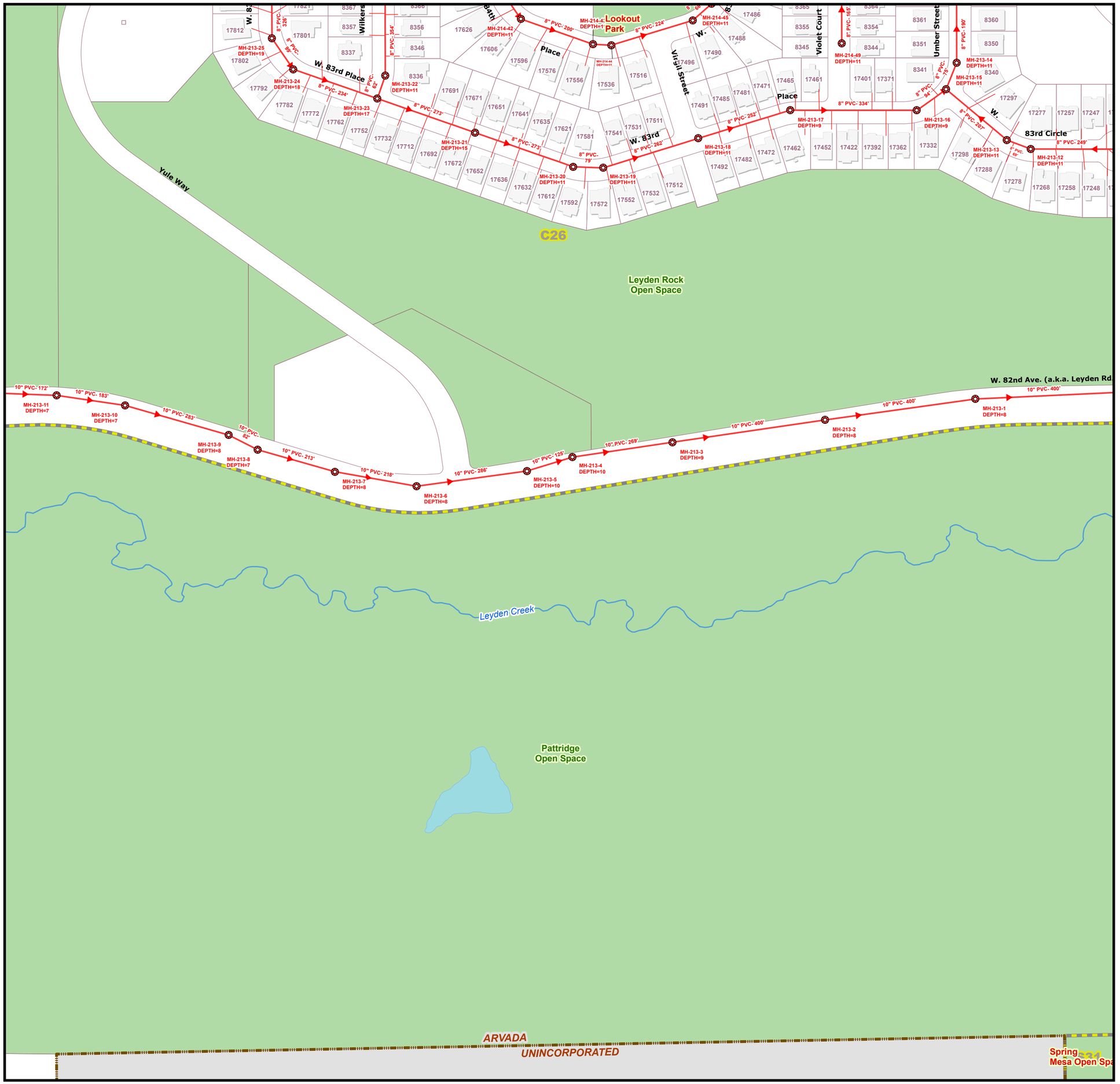
SEWER MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 214	MAP 196	MAP 178
MAP 213	MAP 195	MAP 177
MAP 212	MAP 194	MAP 176

CITY OF ARVADA

LAST REVISION DATE: 3/5/2025



NORTH

0 100 200 300 400

Feet

MAP PAGE 213

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
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Trouble Spots
- Monthly
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SEWER MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 232	MAP 214	MAP 196
MAP 231	MAP 213	MAP 195
MAP 230	MAP 212	MAP 194

CITY OF ARVADA

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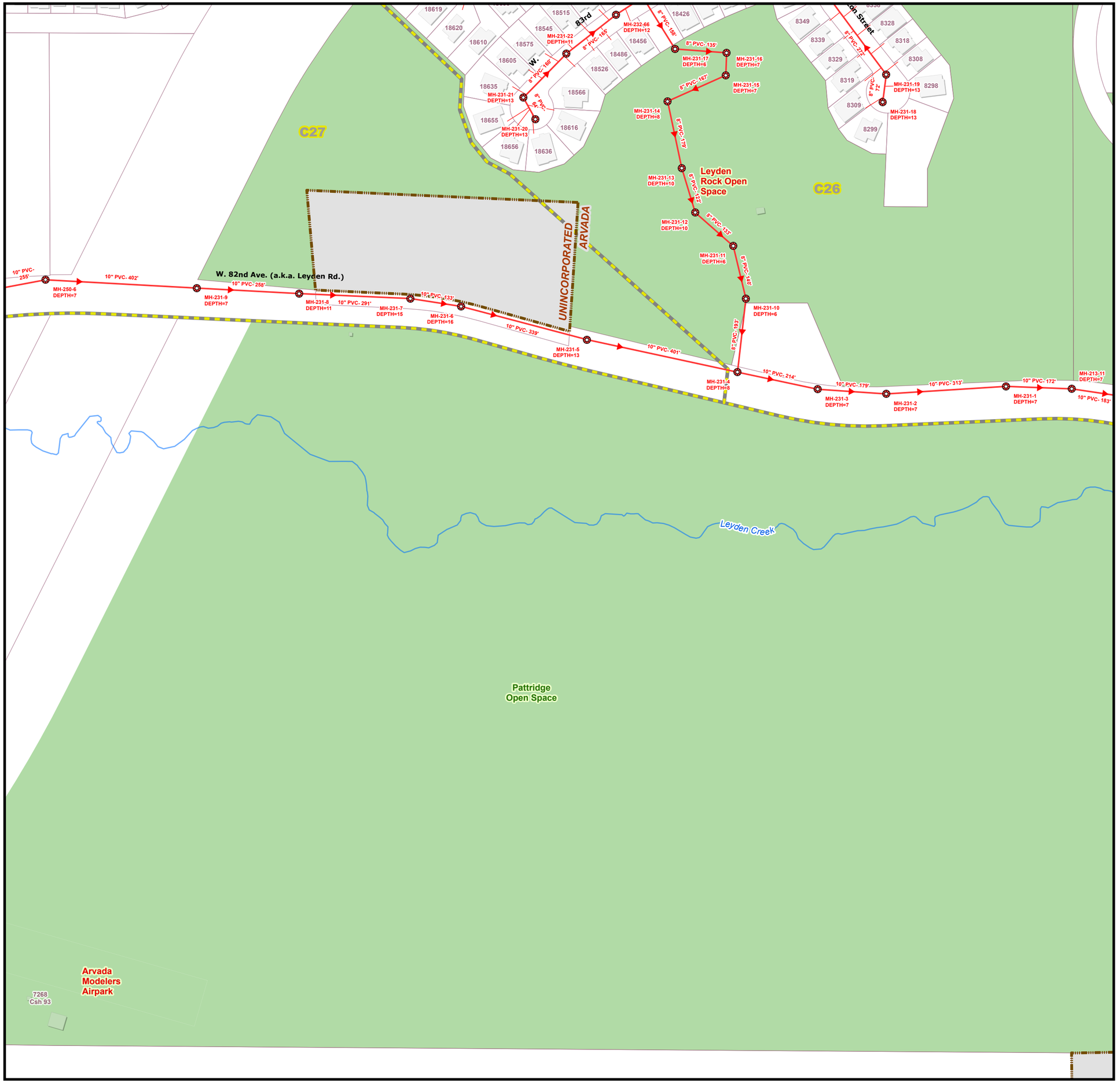

0 100 200 300 400
Feet

MAP PAGE 231

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
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Lateral Lines
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- Under Construction
- Casing

Other Utility Lines
- Chemical Feed
- Electric
- Gas
- Underground Telephone
- Unknown Utility Line
- Asset Group

Trouble Spots
- Monthly
- Tri-Monthly
- Low Pressure Area

SEWER MAPS

SE 1/4 SEC 4
T 2 S, R 70 W

MAP 251	MAP 232	MAP 214
MAP 250	MAP 231	MAP 213
MAP 249	MAP 230	MAP 212

CITY OF ARVADA

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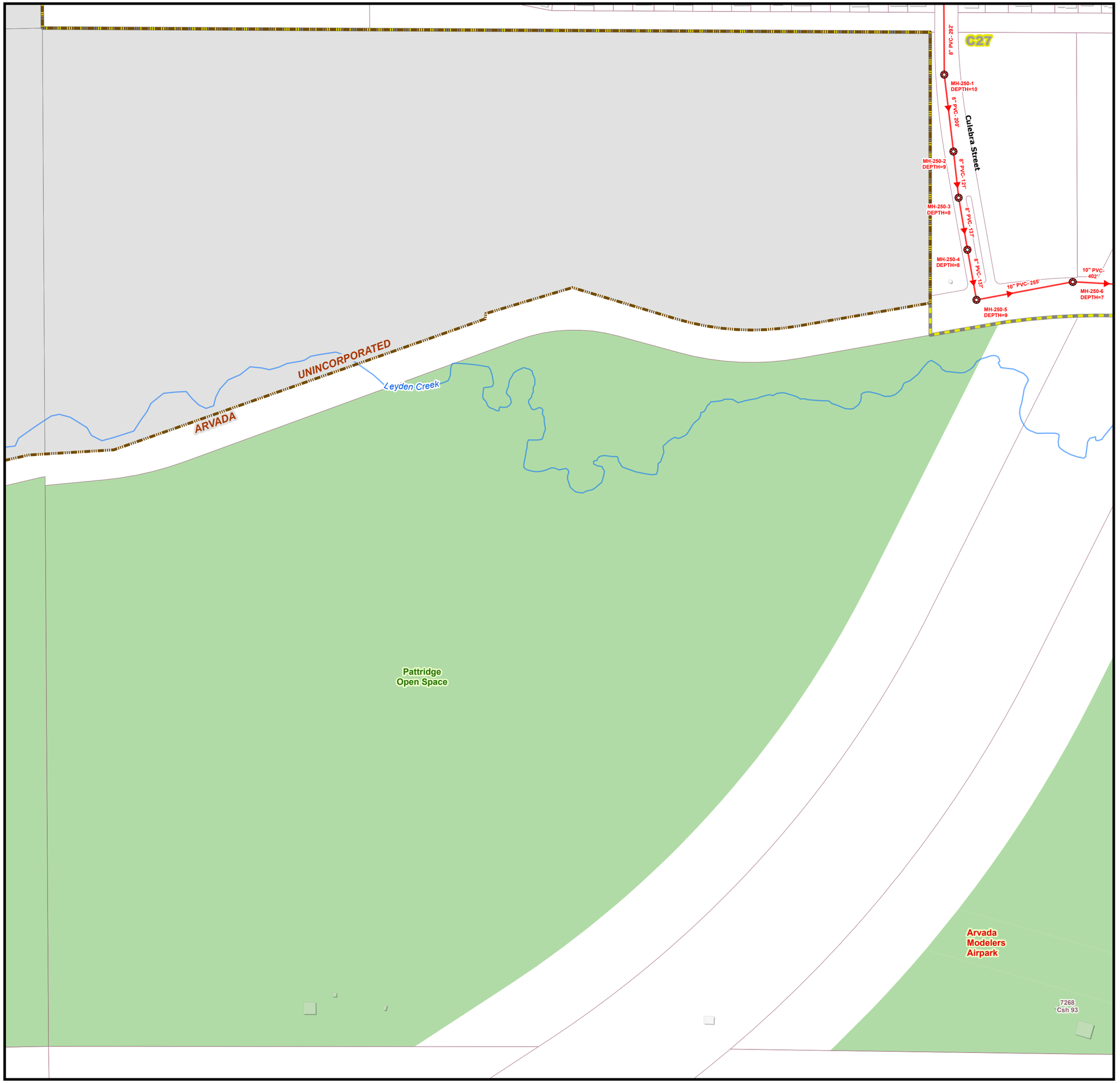

NORTH

0 100 200 300 400

Feet

MAP PAGE 250

Manholes
- Active
- Under Construction
- Private
- Non City

Network Structures
- Flow Meter
- Grinder
- Omni Ball
- Sand and Oil Interceptor
- Tracer Wire Box
- Other Network Structures
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SEWER MAPS

SW 1/4 SEC 3
T 2 S, R 70 W

MAP 264	MAP 251	MAP 232
MAP 263	MAP 250	MAP 231
MAP 262	MAP 249	MAP 230

CITY OF ARVADA

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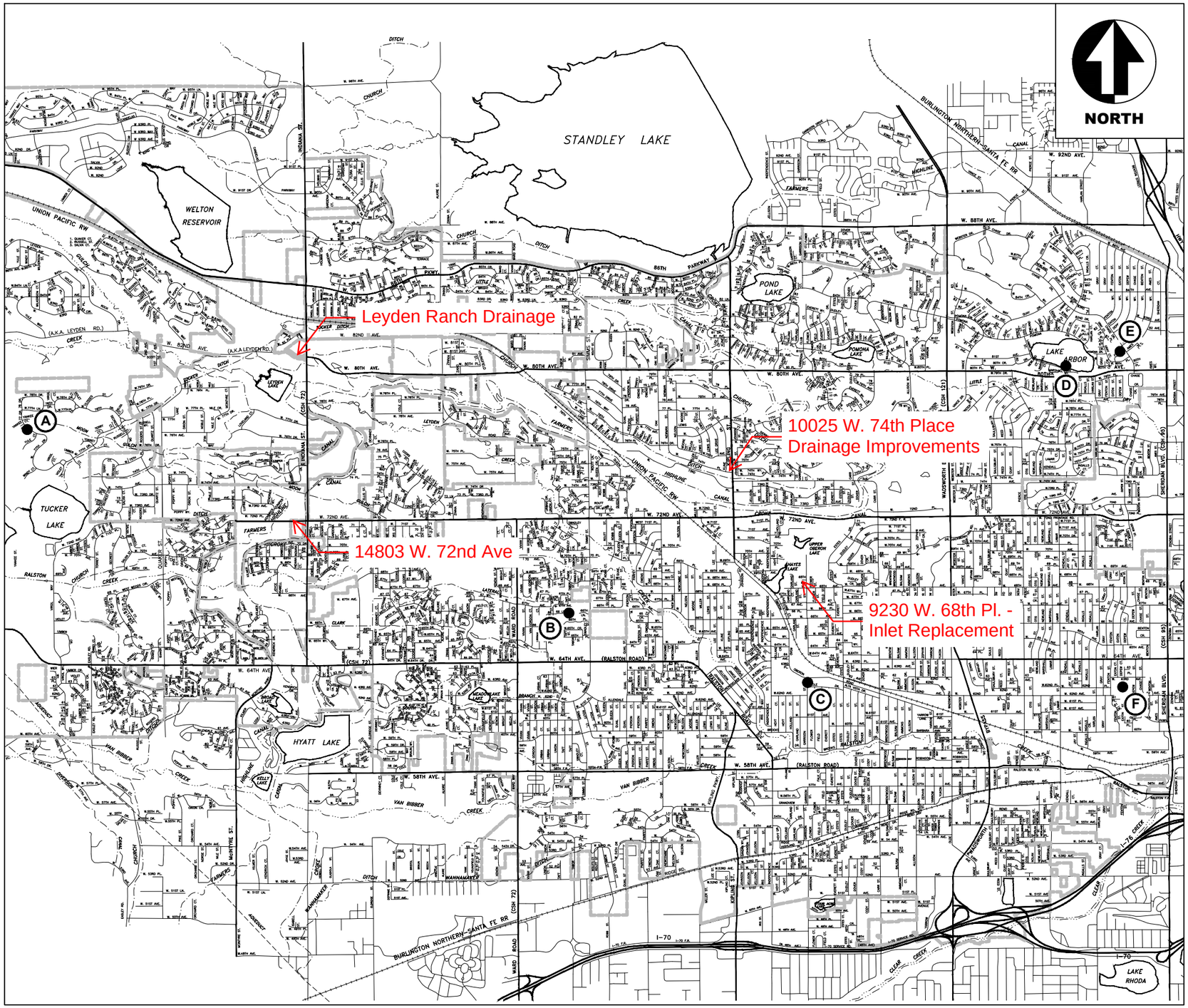

CITY OF ARVADA

PROJECT 22-DR-20

2022 MISCELLANEOUS DRAINAGE

AS-BUILT SET 12-6-2023

INDEX

KEY		DESCRIPTION	SHT.
		COVER SHEET	1
		GENERAL NOTES	2
A		SPRING MESA PARK W. 77TH DRIVE - SOUTH OF 7744 YANKEE COURT	3
B		11948 & 11949 W. 66TH LANE	4
C		GARRISON STREET - SOUTH OF OBERON ROAD JUCHEM DITCH CROSSING	5
D		8020 LAMAR STREET	6
E		8073 FENTON COURT & 8105 CHASE DRIVE	7
F		5649 W 62ND AVENUE (HOMESTEAD PARK)	8
3	*NEW*	10025 W. 74TH PLACE DRAINAGE IMPROVEMENTS	9
	NEW	LEYDEN RANCH DRAINAGE	10
4	*NEW*	14803 W. 72ND AVE.	11
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BID SET 2-17-2023

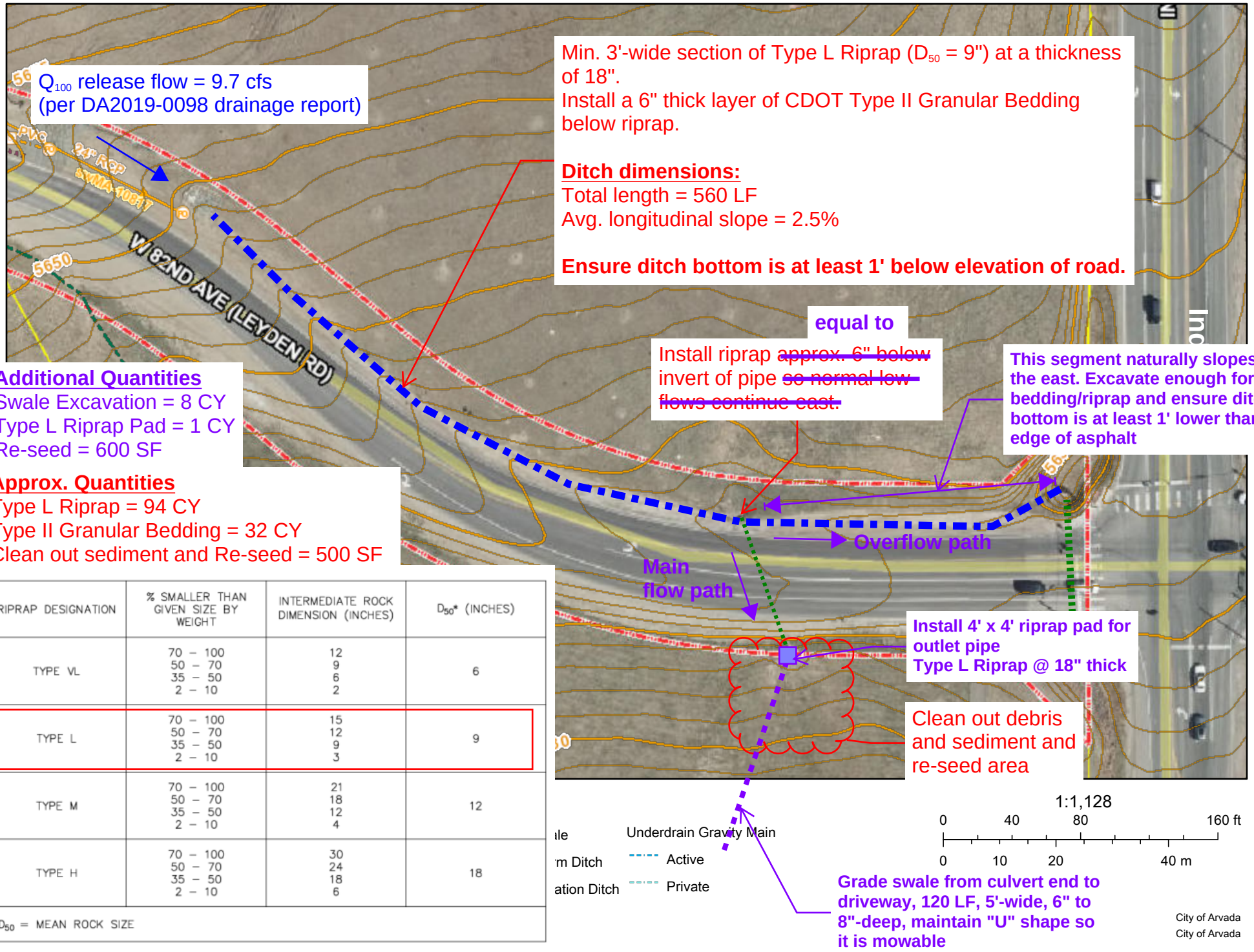
Revision 1 - 4/6/2023
Revision 2 - 6/26/2023
Revision 3 - 8/1/2023
Revision 4 - 8/15/2023

APPROVED BY: Jenny Wolfschlag P.E. — CITY ENGINEER

2/24/23 — DATE

Leyden Ranch Drainage

Revisions, 8/23/2023



Additional Quantities

Swale Excavation = 8 CY
Type L Riprap Pad = 1 CY
Re-seed = 600 SF

Approx. Quantities

Type L Riprap = 94 CY
Type II Granular Bedding = 32 CY
Clean out sediment and Re-seed = 500 SF

RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D_{50}* (INCHES)
TYPE VL	70 – 100 50 – 70 35 – 50 2 – 10	12 9 6 2	6
TYPE L	70 – 100 50 – 70 35 – 50 2 – 10	15 12 9 3	9
TYPE M	70 – 100 50 – 70 35 – 50 2 – 10	21 18 12 4	12
TYPE H	70 – 100 50 – 70 35 – 50 2 – 10	30 24 18 6	18

*D_{50} = MEAN ROCK SIZE

CONSTRUCTION PLANS

FOR

WEST 82ND AVENUE SANITARY SEWER OUTFALL

JEFFERSON COUNTY, CO

AS-BUILT

CITY OF ARVADA GENERAL NOTES
USE FOR SANITARY SEWER CONSTRUCTION

A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION, UNLESS OTHERWISE SPECIFIED HEREIN.

B. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE LICENSED WITH THE CITY OF ARVADA ENGINEERING DIVISION.

C. ALL WORK WILL REQUIRE A CITY OF ARVADA ENGINEERING DIVISION PUBLIC IMPROVEMENT PERMIT PRIOR TO THE START OF CONSTRUCTION. ALL CONTRACTORS AND SUBCONTRACTORS MUST OBTAIN A SEPARATE PERMIT FOR THE WORK BEING COMPLETED BY THE PARTICULAR CONTRACTOR OR SUBCONTRACTOR. ANY CONSTRUCTION WITHIN THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) RIGHT-OF-WAY WILL REQUIRE A CDOT CONSTRUCTION PERMIT PRIOR TO ANY WORK IN THEIR RIGHT-OF-WAY.

D. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED DRAWINGS SIGNED BY THE CITY ENGINEER AND A PRINTED COPY OF THE CURRENT CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" ON SITE AT ALL TIMES.

E. THE CITY OF ARVADA ENGINEERING DIVISION SHALL BE NOTIFIED (PHONE # 720-898-7640) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

F. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.

G. THE CONTRACTOR IS RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY.

H. BENCHMARK LOCATION, ELEVATION AND DATUM ARE AS NOTED.

I. AS-BUILT DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD. UTILITY AS-BUILTS SHALL INCLUDE STATIONING OF ALL FITTINGS, SERVICES AND PERTINENT ELEVATIONS. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THE AS-BUILTS HAVE BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

J. A CITY OF ARVADA TAX CERTIFICATION FORM MUST BE COMPLETED BY ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT. THIS FORM DETAILS ALL MATERIALS WHICH HAVE BEEN INCLUDED IN THE WORK BY CONTRACTORS AND SUBCONTRACTORS. COPIES OF ALL PAID INVOICES FOR MATERIALS SHALL BE ATTACHED TO THE FORM. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THIS FORM HAS BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.

K. OWNER/DEVELOPER SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A SITE OF ONE (1) ACRE OR MORE OR LESS THAN ONE ACRE AND PART OF A LAYER DEVELOPMENT. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF CLEARING, GRADING OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

L. CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR ALL AREAS WHERE DEWATERING IS REQUIRED FROM AN EXCAVATION AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

M. ALL CURB RAMPS SHALL COMPLY WITH THE LATEST CITY OF ARVADA AND ADA STANDARD. CONTRACTOR TO CHECK WITH THE CITY OF ARVADA ENGINEERING DIVISION TO VERIFY THE LATEST CURB RAMP STANDARD PRIOR TO CONSTRUCTION OF ANY RAMP.

N. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF ARVADA ENGINEERING DIVISION, THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

O. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF ARVADA TRAFFIC ENGINEERING DIVISION FOR ACCEPTANCE WITH THE PUBLIC IMPROVEMENTS PERMIT APPLICATION. A PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL ON EXISTING ROADS DURING CONSTRUCTION.

95.7.4 UTILITIES

A. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 24 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.

B. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER T & D DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.

C. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.

D. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.

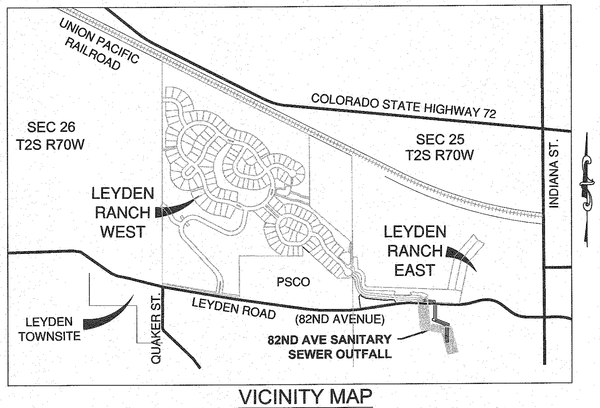
E. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.

F. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

G. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.

H. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.

I. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION BY CALLING 720-898-7800.



VICINITY MAP

SCALE 1" = 1000'

SHEET INDEX	
Sheet Number	Sheet Title
0.0	COVER SHEET
1.0	WEST 82ND SANITARY SEWER 10+00 - 21+50
~~1.1~~	~~WEST 82ND SANITARY SEWER 21+50 - END~~
~~2.0~~	~~GESC PLAN~~
~~3.1~~	~~DITCH GROSSING NOTES & DETAILS~~
~~1.9~~	~~JEFFERSON COUNTY G.E.S.C STANDARD NOTES AND DETAILS~~

CITY OF ARVADA STANDARD DETAILS

SANITARY
SS-1
SS-2
SS-3
SS-4
SS-5
SS-7
SS-13

JEFFERSON COUNTY STANDARD DETAILS

ROADWAY
STND-12 MODIFIED WITH A 6 FT TRENCH WIDTH

PROJECT CONTACTS
OWNER/DEVELOPER:
LEYDEN PROPERTIES, LLC
3002 S. HURON STREET
ENGLEWOOD, CO 80110
(303) 920-5400

CIVIL ENGINEERS:
CVL CONSULTANTS
10333 E. DRY CREEK SUITE 240
ENGLEWOOD CO 80112
(720) 482-9526

PLANNER
PCS GROUP
#3, B-180 INDEPENDENCE PLAZA
1007 16TH STREET
DENVER, CO 80265
(303) 531-4905

CITY OF ARVADA
ENGINEERING DEPARTMENT
(720) 898-7640

JEFFERSON COUNTY
TRANSPORTATION ENGINEERING DEPARTMENT
(303) 271-8495

ARVADA FIRE PROTECTION DISTRICT
(303) 424-3012

JEFFERSON COUNTY STANDARD CONSTRUCTION NOTES
USE FOR PAVEMENT CONSTRUCTION AND REPLACEMENT

1. A CONSTRUCTION PERMIT FROM TRANSPORTATION AND ENGINEERING DIVISION IS REQUIRED PRIOR TO COMMENCING WORK WITHIN COUNTY RIGHT-OF-WAY.
2. ANY WORK WITHIN STATE RIGHT- OF- WAY WILL REQUIRE A STATE CONSTRUCTION PERMIT.
3. THE CONTRACTOR SHALL NOTIFY TRANSPORTATION AND ENGINEERING DIVISION AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION WITHIN THE RIGHT- OF- WAY.
4. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY TRANSPORTATION AND ENGINEERING DIVISION PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN COUNTY RIGHT- OF- WAY.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. CALL 534_6700.
6. CONSTRUCTION SPECIFICATION: CURRENT EDITION OF THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SPECIAL PROVISIONS AND REVISIONS THERETO, AND AS AMENDED BY CHAPTER 5 OF THE JEFFERSON COUNTY ROADWAY DESIGN AND CONSTRUCTION MANUAL.
7. THE SUBGRADE MATERIAL SHALL BE SCARIFIED OR REMOVED TO A DEPTH REQUIRED BY JEFFERSON COUNTY ACCORDING TO INFORMATION OBTAINED FROM LABORATORY TESTS AND/OR AS REQUIRED IN THE PAVEMENT DESIGN REPORT. ADDITIVES OR APPROVED MATERIAL MAY BE REQUIRED IF THE NATIVE MATERIAL IS UNSATISFACTORY. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY DETERMINED IN ACCORDANCE WITH AASHTO DESIGNATION T180 OR T99 AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 203.07 (1991 ED.).
8. SERVICE TRENCHES AND UTILITY MAIN TRENCHES SHALL BE COMPACTED THROUGHOUT THE DEPTH OF TRENCH AS SPECIFIED IN NOTE
9. CLASS 6 AGGREGATE BASE COURSE FOR SHOULDERS SHALL BE PLACED AND COMPACTED TO 95% STANDARD PROCTOR AFTER PLACEMENT OF ASPHALT.
10. EXISTING ASPHALT PAVEMENT SHALL BE STRAIGHT SAWCUT OR BLADECUT WHEN ADJOINING WITH NEW ASPHALT PAVEMENT. SS_1 TACK COAT SHALL BE APPLIED TO ALL SURFACES.
11. STRUCTURAL SECTION SHALL BE AS APPROVED BY THE JEFFERSON COUNTY DEPARTMENT OF TRANSPORTATION AND ENGINEERING DIVISION, WITH PAVEMENT DESIGN IN ACCORDANCE WITH THE JEFFERSON COUNTY ROADWAY DESIGN AND CONIFS18 STRUCTION MANUAL.
12. CONCRETE MAY BE PLACED BY MACHINE METHODS PROVIDED THAT ALL FINISH LINES ARE WITHIN 1/8" ± TOLERANCE OF THE LINES SHOWN ON THE PLANS. THE FLOWLINE MUST BE FREE DRAINING.
13. ONE HALF (1/2) INCH EXPANSION JOINT MATERIAL SHALL BE INSTALLED WHEN ABUTTING ANY EXISTING CONCRETE OR A FIXED STRUCTURE.
14. SIDEWALKS AND DRIVEWAYS SHALL HAVE THE NAME OF THE CONTRACTOR AND THE YEAR OF CONSTRUCTION IMPRESSED THEREIN USING BLOCK LETTERS NOT LESS THAN ONE (1) INCH HIGH AND THREE_EIGHTHS (3/8) INCH DEEP IN EACH DRIVEWAY AND AT EACH END OF CONSTRUCTION, OR A MINIMUM OF EVERY 150 LINEAL FEET OF SIDEWALK.

JEFFERSON COUNTY GENERAL NOTES

1. ALL CONSTRUCTION, EXCAVATION, ROAD RESTORATION, AND TRAFFIC CONTROLS THAT TAKE PLACE IN THE COUNTY RIGHT-OF-WAY SHALL BE PER JEFFERSON COUNTY ROADWAY DESIGN AND CONSTRUCTION MANUAL, AS WELL AS RIGHT-OF-WAY AND CONSTRUCTION PERMIT POLICIES.
2. TRIANGULAR SECTIONS OF ROADWAY RESTORATION WILL NOT BE PERMITTED. THE CONTRACTOR SHOULD USE RECTANGULAR PATCHES FOR PROPER COMPACTION OF HMA.
3. MILL AND OVERLAY WILL HAVE SMOOTH TRANSITIONS, IF NOT POSSIBLE WITH CONVENTIONAL METHODS THEN THE CONTRACTOR SHALL IMPLEMENT INFRARED PATCHING.
4. CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT, AT ITS OWN COST, FOR WORK WITHIN JEFFERSON COUNTY RIGHT OF WAY.

PROJECT BENCHMARK: EAST ¼ CORNER SECTION 25, T. 2 S., R. 70 W., 6TH PM, A 3.25" ALUMINUM CAP LS 11434 dated 1999. ELEVATION = 5718.15 CITY OF ARVADA

PROJECT DATUM: CITY OF ARVADA ELEVATION = NAVD 88 - 2.5'

BASIS OF BEARING: BEARINGS ARE BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, JEFFERSON COUNTY, COLORADO AS BEING MONUMENTED AT THE EAST QUARTER CORNER WITH A 3.25" A.C. LS 11434 1999 AND AT THE SOUTHEAST CORNER WITH A PK NAIL WITH REFERENCE TIES BEARING SOUTH 00°28'44" EAST A DISTANCE OF 2644.57 FEET.

COLORADO LICENSED
James J. Jannicke
35693
8-3-15
PROFESSIONAL ENGINEER

I hereby affirm that the public improvements for the Leyden Ranch West Subdivision have been constructed in substantial compliance with the construction plans approved by the City of Arvada.

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
1-800-922-1987
UNCC UTILITY NOTIFICATION CENTER OF COLORADO

CITY ENGINEER

DATE

3367R
JOB NUMBER

Review is for general compliance with the city of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements", lasted edition. Sole responsibility for completeness and or accuracy of these Documents shall remain with the Registered Professional Engineer sealing these Plans. The city does not accept liability for facilities designed by others.

ENGINEERING DIVISION ACCEPTANCE BLOCK

No.	Revisions	Date	Init.	Appr.	Date
2	ADD GATES/MODIFY STEEL CASING PER COA	2/19/14	SJK		
1	RELOCATED TO CAMPBELL PROPERTY				

CVL CONSULTANTS
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

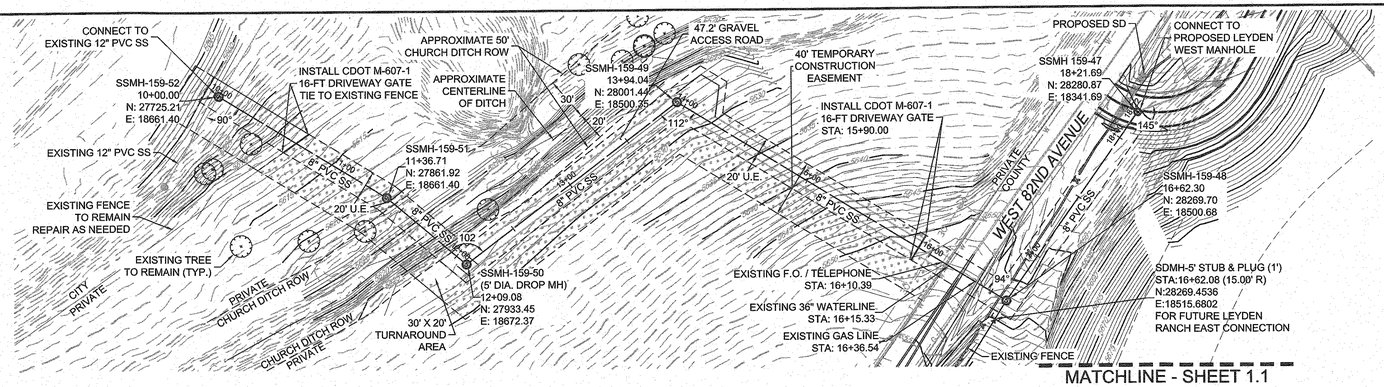
LEYDEN PROPERTIES, LLC.
3002 S. HURON STREET
ENGLEWOOD, COLORADO 80110

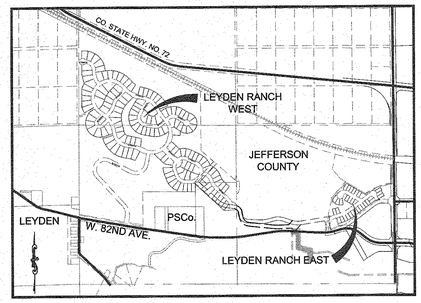
WEST 82ND AVENUE SANITARY SEWER OUTFALL
ARVADA, COLORADO
COVER SHEET

SCALE: AS SHOWN
FILE NO: 30131801
DRAWN BY: SCL
CHECKED BY: JJJ
DATE: 01/01/14

SHEET NUMBER 0.0

0.0 COVER SHEET / AS-BUILT.dwg

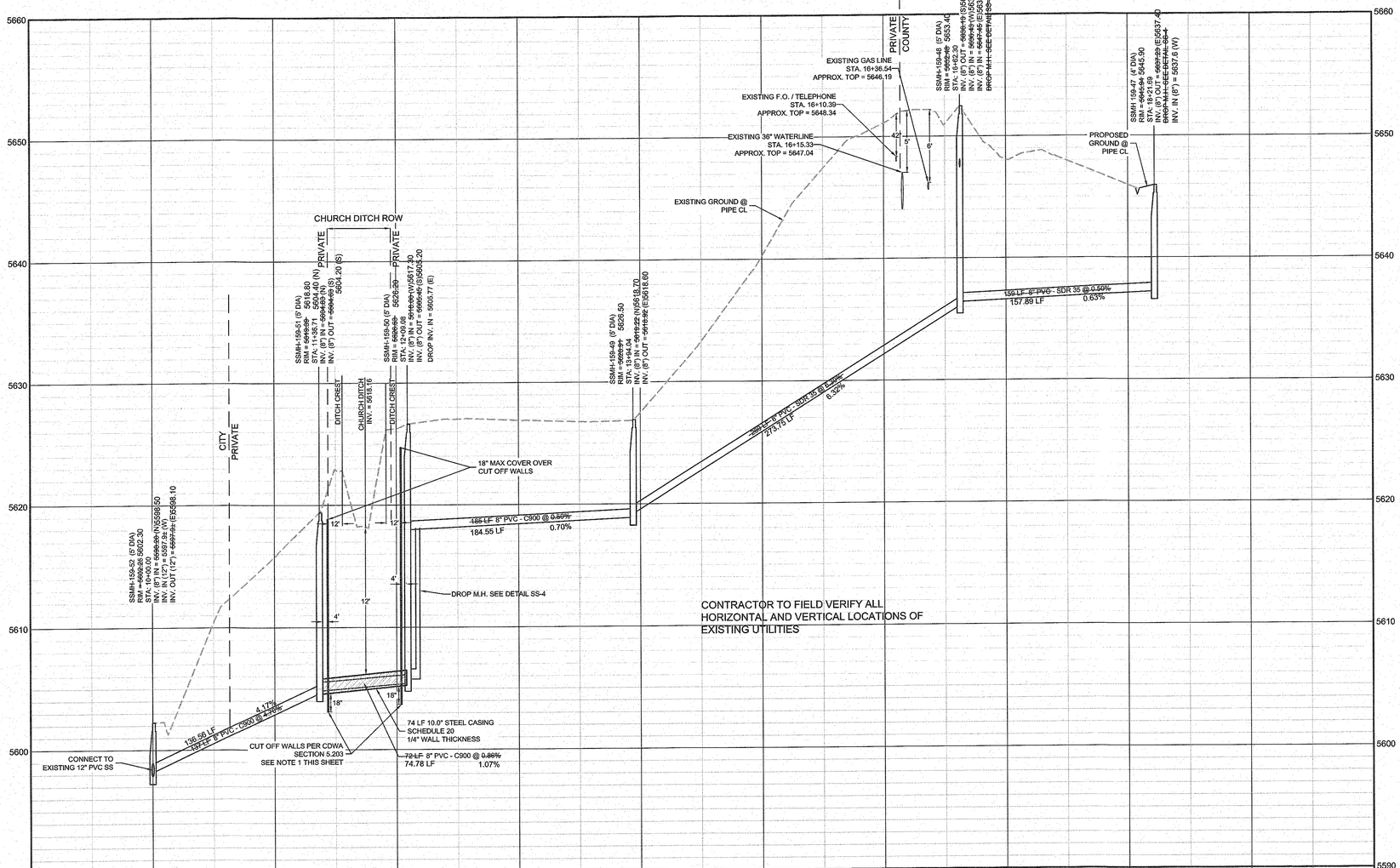




KEYMAP
SCALE: 1"=1200'

PLAN: W 82ND AVE SANITARY SEWER OUTFALL PLAN 1

HORIZONTAL SCALE: 1" = 50'



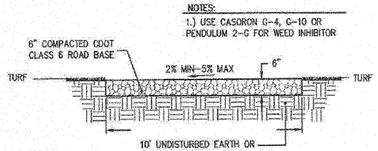
CONTRACTOR TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES

PROFILE: W 82ND AVE SANITARY SEWER OUTFALL PROFILE 1

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

NOTE:

1. *FOR UNDERGROUND UTILITIES INSTALLED BY TRENCHING THROUGH THE DITCH BANKS, OR WITHIN THE DITCH ROW, REINFORCED CONCRETE CUTT-OFF COLLARS SHALL BE PROVIDED AT BOTH RIGHT OF WAY LINES. CUT-OFF WALLS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE (COMPRESSIVE STRENGTH 4500 PSI AFTER 28 DAYS) TO A MINIMUM THICKNESS OF 8", AND SHALL BE REINFORCED WITH #4 REINFORCING BARS AT 8" EACH WAY. THE CUT-OFF WALLS SHALL BE SET INTO UNDISTURBED SOIL A MINIMUM OF 18" TO EACH SIDE OF AND BELOW THE ENCASEMENT PIPE, AND SHALL BE CAST A MINIMUM OF 4 FEET FROM THE END OF THE CASING AND A MINIMUM OF 3 FEET FROM THE LIMITS OF THE FLOW SECTION, AND SHALL HAVE A MAXIMUM OF 18" COVER MEASURED AT THE TOP OF EACH WALL. THE CASING PIPE IS TO BE WRAPPED WITH A LAYER OF RAM-NECK OR SIMILAR MATERIAL SO AS TO PROVIDE A WATERTIGHT SEAL WITH THE CONCRETE. THIS MATERIAL IS TO BE APPLIED TO THE CASING PIPE WITHIN THE FORMS FOR THE CUT-OFF WALL.*
2. *PLEASE REFER TO "DESIGN REVIEW PROCESS AND DESIGN CRITERIA FOR FACILITIES, CDWA CHURCH DITCH WATER AUTHORITY AMENDED 12/13/10" FOR PIPE CASING REQUIREMENTS AND CUTOFF WALL DESIGN..*



ACCESS MAINTENANCE ROAD AND TRAIL DETAIL
NTS

AS-BUILT DATA SUPPLIED BY AZTEC SURVEY.

AS-BUILT

50 25 0 50 100
SCALE: 1" = 50'

COLORADO | CERTIFIED | JAMES J. JANNICKE | 35693 | 8-3-15 | PROFESSIONAL ENGINEER

PREPARED UNDER THE SUPERVISION OF

JAMES J. JANNICKE
COLORADO P.E. 35693

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No.	Revisions	Date	Init.	Appr.	Date
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3002 S. HURON STREET
ENGLEWOOD, COLORADO 80110

WEST 82ND AVENUE SANITARY SEWER PLANS
ARVADA, COLORADO
PLAN AND PROFILE 1

SCALE:	AS SHOWN	FILE NO:	301318.01
DRAWN BY:	SCL	CHECKED BY:	JJJ
DATE:	01/31/14		

SHEET NUMBER 1.0

SS_Outfall 82nd P&P AS-BUILT.dwg

STATEMENT OF WORK

1. BACKGROUND:

The City of Arvada (COA) is requesting proposals from professional licensed engineering firms for the design of the Leyden Road (W82nd Ave) project ("project") from Indiana Street (State Highway 72) to Culebra Street. The assigned COA Project No. is 25-ST-20. The project will not be completed within one year; however, the intent is for the contract period to cover the length of the project.

Leyden Road is an east-west corridor for the COA's transportation network serving 11,000 daily vehicles trips. It provides connectivity to major north-south corridors including State Highways 72 and 93 which provide access to Golden, Boulder, and other Front Range cities.

This project will include work on Leyden Road between Culebra Street and Indiana Street and is to be designed per the COA Standards and Specifications. The main goal of the project is to reconstruct the section between Orion Way and Indiana Street to the COA Standards Collector cross section, or similar. The current design funding for the project was collected from development agreement fees from the Leyden Ranch and Leyden Rock developments to fund improvements to Leyden Road. The existing alignment is recognized by citizens as a safety concern for egress in case of wildfire and as lacking pedestrian facilities for bike and pedestrian travel, particularly for school aged children attending Ralston Valley High School, located east of Indiana Street.

The work shall follow the latest editions of Colorado Department of Transportation's (CDOT) Roadway and Bridge Design Manuals and Standard Specifications for Road and Bridge Construction, PROWAG: Accessibility Guidelines, AASHTO: A Policy on Geometric Design of Highways and Streets, AASHTO: Roadside Design Guide, and other requirements determined by the COA.

2. SCOPE:

The project will consist of all work required for the final design of Leyden Road from Indiana Street (SH72) to Culebra Street which will follow the latest version of the COA Standards and Specifications for the documents listed below:

- Construction drawings
- Project special provisions
- Bidding documents
- Cost estimates
- Applicable roadway design reports (drainage, SWMP, etc.)

The work shall also include Right-of-Way (ROW) negotiation, acquisition and preparation of ROW plans and legal descriptions for the widening portions of the project. A portion of the project between Orion Way and W82nd Place will require annexation from Jefferson County and will require preparation of annexation documents.

The Leyden Road widening scope between Indiana Street and Orion Way shall include:

- Two travel lanes, bike facilities, curb/gutter, a striped median, and sidewalks or a multiuse trail. The desired cross section will be most similar to the Collector cross section in COA standards.
- The Project scope in this area may be limited due to existing topography, utilities, and other site constraints. The Consultant shall vet and value engineer the proposed cross section in the Project Initiation and Concept phase to allow for the most efficient and cost-effective design given these constraints. Existing overhead electric is expected be undergrounded as part of this project.
- The anticipated eastern end point of the project is Indiana Street (State Highway 93). Indiana Street is expected to be widened to two lanes in either direction, acceleration, and deceleration lanes in the future. However, there is currently no estimated timeline for the Indiana Street widening project to be studied, designed, or constructed. For this project the COA would like the Leyden Road design to include space for these future improvements and have a temporary design in place to limit future acquisition and work on Leyden Road caused by the Indiana Street widening. The COA would also like to limit the impact to the Indiana and 80th intersection to the maximum extents practicable for this project.

- Consultant to provide detailed traffic control plans for COA and AFD approval. Leyden Road is the main egress route in case of emergency. If Leyden Road is completely shut to traffic during construction a detailed egress and traffic control proposal will be required for emergency vehicle ingress and evacuation egress.

The scope between Culebra and Orion Way shall include analysis and design of the following:

- Proposed pedestrian crosswalk and ramp at Yule Way crossing Leyden Road allowing access to the Pattridge Open Space. Consultant to evaluate the installation of a rectangular rapid flashing beacon (RRFB), or similar, at this location.
- Concept plans for a RRFB crossing of Leyden Road at Culebra Street to the Pattridge Open Space trail. This will require concept plans from the Leyden Road crosswalk to the trail which will include a pedestrian bridge crossing Leyden Creek. Grading plans can rely on other topographic resources that does not require detailed survey for the concept phase.
- Plans for removal of Leyden Road landscape islands (6) to be replaced with pavement section. The purpose of the landscape islands removal is to provide a consistent 30' wide pavement section per the Emergency Preparedness Study (included in attachments) for 2 eastbound lanes of emergency egress. Plans shall also evaluate the need for traffic calming devices for speed reduction and pedestrian safety due to the removal.
- Mill and overlay plans from Leyden Rock Drive to Orion Way. These plans will only be included in the plan set if the 30% design schedule aligns with the Pavement team's desired repaving schedule west of Orion Way. Please break out these plans as a separate item in the itemized proposal cost.

The COA has completed Preliminary Geotechnical and Environmental Reports which are attached to the RFP. Further geotechnical boreholes will be completed for anticipated retaining walls when the Design is at 60% design. The COA has a geotechnical engineer under contract for the geotechnical work and will keep the Contract with them for the remainder of the Project. Chosen consultant will be expected to work with the hired geotechnical engineer for any further explorations or information required.

General information and scope of services for the project is expanded on below. They are a general outline of the tasks, at minimum, that are to be a part of the scope of work. In the proposal, the Consultant shall provide a detailed scope of work and schedule. The Consultant is expected to evaluate staffing needs and determine design tasks that can be completed concurrently to streamline the design schedule. All proposals shall include the minimum required tasks below.

<u>Task 1 – Project Management, Coordination, and Meetings</u>
This task is in support of the COA's Project Manager with the management of this Project from Concept to Final Design.

Task Description -

- Coordinate project tasks, including project meetings, with COA's Project Manager, and other COA personnel and departments as required.
- Review sub-consultant invoices; prepare and submit monthly invoices and progress reports. Invoices must meet the COA's format and requirements.
- Develop and maintain a detailed Critical Path Method (CPM) project baseline schedule; update monthly and include with monthly invoice.
- Attend project management meetings, consultant team coordination meetings and outside agency coordination meetings. Expected coordination meetings
- Prepare and submit a QA/QC plan and adhere to the process throughout the project.
- Schedule regular bi-weekly project coordination meetings.
- Prepare agendas, exhibits, and handouts for bi-weekly meetings. Prepare meeting minutes to be completed and distributed within 7 days of each meeting.
- Manage and coordinate work efforts of the Consultant Team.
- Public Outreach included in this Task if an area of design has multiple options and public engagement could be utilized to improve the design.

<u>Task 2 – Project Initiation, Kickoff, and Concept Plans</u>
This Task shall include Concept Plans and Memorandum for the Scope above. The Task includes research of

existing information, as-builts, reports/studies, and COA files to draft concept plans for COA review and approval. Hired consultant to present alternatives that require further analyses and value engineering at this Task.

This task is in support of the COA's Project Manager with the management of this Project's kickoff.
Task Description -

- Coordinate project tasks, including project kickoff meetings, with COA's Project Manager, and other COA personnel and departments as required. Will require kickoff with outside agencies as well including but not limited to: Jefferson County, Tucker Ditch, Church Ditch, and CDOT.
- The plans shall include cover sheet and notes, concept plan and profiles, and typical sections with appropriate callouts. Concept grading shall be included showing estimated grading and construction limits.

Task 3 – Data Acquisition and Survey

This task includes field survey and related services as needed to complete the design of the project, including survey for road widening elements, ROW acquisition and annexation, and other survey work will be necessary.

Preliminary survey for the project has been completed by COA and includes preliminary information below:

- Subdivision Plats, Property Deeds, Recorded Land Surveys, Recorded ROW documents from Jeffco Clerk and Recorder. No title commitment has been completed for any parcels; no easement research has been completed.
- Project Control Diagram including Control Points and found Aliqout points.
- AutoCAD DWG in project control with surveyed utility data, fence lines, found monuments, unadjusted cogo data tied to found aliquot monuments with associated deed and ownership data per Jeffco Clerk and Recorders office.
- Ortho mosaic from drone flight in project control.
- SUE utility locates per latest industry standard.

Task 4: ROW Annexation and Acquisition and ROW Plans Preparation

This task shall include the engagement of professional ROW services for the appraisal, negotiation, and acquisition of ROW and easements necessary for the project. All activities shall be performed in conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Work to include, but not be limited to, coordination with COA Project Engineer, Consultant, appraiser, and affected property owners, performing appraisals or value findings in accordance with the COA requirements, review of legal descriptions and appraisals, preparing offer letters and other necessary correspondence with property owners, conducting negotiations with each owner, coordinate and attend real estate closings, and litigation support, if necessary.

The project includes a stretch of Leyden Road located within Jefferson County ROW between Orion Way and West 82nd Place. This task includes annexation support for COA for all of the coordination and documents listed for ROW acquisition and more, if necessary.

The Consultant shall prepare ROW plans and legal descriptions and exhibits. The ROW plan sheets shall include, but not be limited to: Title Sheet, Tabulation of Properties, Survey Control Diagram, and ROW Plan Sheets. Legal descriptions and exhibits shall be prepared for fee simple acquisitions, permanent easements and temporary construction easements. The Consultant shall make revisions to the ROW plans as needed throughout the appraisal and negotiation process for those changes approved by the COA.

The proposed ROW line, permanent and temporary easements and existing ROW lines shall be staked.

Task 5: Title Insurance and Closing Services

For this task, a Title Company shall be contracted to provide title insurance in the amount of the value of the parcel being acquired. Title insurance will not be necessary for certain easements where, at the discretion of the COA, it is determined that it is not cost effective to purchase the title insurance. However, in all cases a title commitment, with copies of all conveyance documents, shall be furnished to the COA along with a 5-year history of all changes in ownership to the property. The Title Company shall also provide automatic updates of any change in ownership during the acquisition process up to the date of closing.

The Title Company shall arrange for all necessary closings, and all related activities, including, but not limited to, escrow services, update title commitments as to the amount to be insured, satisfaction of liens, calculate final settlement figures and prepare all closing documents, except deeds, per instructions from COA staff. The Title Company shall disburse settlement funds as applicable and assist in recording title documents and issue a 1099-S to the property owner and the Internal Revenue Service (IRS) in accordance with Federal Law.

Task 6: Preliminary Design (Minimum 30% Design)

For this task the Consultant should complete roadway design that includes storm drainage and water quality analysis (preliminary drainage report) and utility design and coordination. The design shall be advanced enough such that ROW (fee simple, permanent, and temporary easements) limits can be determined. The design shall also be advanced enough that further geotechnical or environmental investigations needed for design are identified and kicked off following this Task. The preliminary design plan set shall include a cost estimate and plans, but is not limited to the following drawings:

- Title Sheet
- General Notes
- Typical Sections
- Roadway Plan and Profile
- Grading, Drainage, and Utility Plans
- Wall Design
- Landscape Plans
- Construction Phasing Plan
- Ownership Map
- Cross Sections

Consultant will be responsible for determining any additional submittal documentation necessary and provide that as part of their proposal.

Task 7: 60% Roadway Design

Based on COA comments provided following the 30% submittal review, prepare construction drawings, engineer's cost estimates, project special provisions, standard special provisions, and technical reports. A SWMP plan per the City's templated is expected beginning at this submittal. The 60% plan drawings shall include construction drawings similar to the Final Design.

Task 8: 90% Roadway Design

Based on previous comments received following the 60% submittal review, prepare construction drawings, engineer's cost estimates, project special provisions, standard special provisions, and technical reports. The 90% plan drawings shall include, but not limited to, those listed in Task 9.

Task 9: Final Design

This task will prepare final construction drawings, bidding documents, project special provisions, and final cost estimate. Note that the Consultant shall obtain or assist the COA with obtaining approvals from utility companies (Xcel, Comcast, etc) and irrigation ditch companies, as needed. The final construction drawings shall, at a minimum, include the following:

- Title Sheet
- General Notes
- Typical Sections
- Summary of Approximate Quantities
- Tabulations
- Removal and Resets Plans
- Erosion Control Plans
- Roadway and Intersection Plans
- Roadway Profiles
- Tabulations of Storm Sewers and Utilities
- Drainage and Utilities Plans
- Drainage and Utility Profiles

- Stormwater Management Plan
- Grading Plans
- Suggested Construction Phasing
- Structure (Retaining Wall) Plans
- Summary of Traffic Items, Tabulation of signs
- Traffic Control Plans
- Pavement Marking Tabulation
- Existing Striping
- Final Signing and Striping
- Construction Phasing Signing
- ROW Plans
- Roadway Cross Sections
- Hardscape Plans
- Landscape Plans
- Irrigation Plans, if applicable
- Lighting Plans

Consultant will be responsible for determining any additional submittal documentation necessary and providing that as part of their proposal. This can include any value engineering options

Exhibit D

AN AGREEMENT BETWEEN THE CITY OF ARVADA AND OLSSON, INC. FOR DESIGN SERVICES RELATING TO THE LEYDEN ROAD IMPROVEMENTS IN AN AMOUNT NOT TO EXCEED $899,738.00 IN THE FIRST YEAR

INSURANCE REQUIREMENTS

1. GENERALLY. Consultant will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Consultant pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.

2. TYPES REQUIRED. The following listed insurance requirements shall be carried by the selected vendor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

2.1 ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than $1,000,000.00 for bodily injury and property damage for each occurrence and not less than $2,000,000.00 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.

2.2 ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of $1,000,000.00 each occurrence and $2,000,000.00 general aggregate.

2.3 ☒ **Automobile Liability** for limits not less than $1,000,000.00 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.

2.4 ☐ **Umbrella Liability** of $[____], following form to the Commercial General Liability.

2.5 ☐ **Professional Liability** Professional Liability insurance in an amount of not less than $1,000,000.00 per occurrence, covering the professional work contemplated under this proposal. The coverage shall have an extended reporting period of three years following the date of substantial completion of the work for reporting of claims.

2.6 ☐ **Pollution Legal Liability Insurance** for limits not less than $1,000,000.00 per occurrence (or claims made) and not less than $1,000,000.00 aggregate for bodily Injury, personal Injury and property Damage.

2.7 ☐ **Privacy/Network/Cyber Liability Insurance** for limits not less than $1,000,000.00 for any firm providing product or services associated with IT, software, communication, or network.

2.8 ☐ **Other.**

3. ADDITIONAL REQUIREMENTS.

3.1 Issuance of the Agreement is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the vendor fails to submit the required insurance documents within 14 calendar days after notice to submit such policies is given to the vendor by a City representative, the vendor may be in breach of the Agreement.

3.2 Except for Workers Compensation, Employer's Liability insurance, Automobile Liability and Professional Liability insurance, the City of Arvada must be endorsed as an additional insured on a Certificate of Insurance.

3.3 All coverage must be written with carriers holding a minimum A.M. Best rating of A-VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.

3.4 The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

3.5 All proof of insurance documentation is due to Arvada within 14 days of execution of this Agreement.

CITY OF ARVADA

REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM 8.A.2.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation

Report in Brief

Barber-Nichols has acquired the 1.793-acre parcel of land located at 6290 West 56th Avenue and is requesting annexation into the City of Arvada for utility services. Additionally, the applicant is requesting to rezone the parcel of land from Jefferson County's R-2 designation to IL (Light Industrial) in order to construct an office and manufacturing facility. Barber-Nichols is an aerospace and defense contractor that designs, manufactures, assembles, tests, and services specialty pumps, turbines, compressors and their integrated systems. With several smaller buildings in the surrounding neighborhood, Barber-Nichols is looking to make a significant move to consolidate their machining operations and improve production efficiency. With the construction of this facility, Barber-Nichols will consolidate three existing buildings into one.

The Arvada team recommends that the City Council Approve R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation.

Financial Impact

There is no fiscal impact to the city.

Background

Barber-Nichols has acquired the 1.793-acre parcel of land located at 6290 West 56th Avenue and is requesting annexation into the City of Arvada for utility services. Additionally, the applicant is requesting to rezone the parcel of land from Jefferson County's R-2 designation to IL (Light Industrial) in order to construct an office and manufacturing facility.

Barber-Nichols is an aerospace and defense contractor that designs, manufactures, assembles, tests, and services specialty pumps, turbines, compressors and their integrated systems. With several smaller buildings in the surrounding neighborhood, Barber-Nichols is looking to make a significant move to consolidate their machining operations and improve production efficiency. With the construction of this facility, Barber-Nichols will consolidate three existing buildings into one.

The subject property is currently located on the south side of West 56th Avenue, between Marshall Street and Harlan Street, in unincorporated Jefferson County. A Phase I Environmental Site Assessment revealed the property was initially developed with a residential structure in 1922. Additional research shows that by 1972, the trees on the property were removed, and it was being used for the storage of trucks and equipment. Currently, the property is being used as a parking and storage lot.

Discussion

Div. 8-3-3 Annexation and Disconnection Approval Criteria	Finding	Rationale
1. The annexation is in accord with the Comprehensive Plan and the best interests of the City would be served by annexation of the subject property.	Complies	The annexation area is included within the Comprehensive Plan Future Land Use map and consistent with the Clear Creek / I-76 Community Plan.
2. The property is capable of being integrated into the City and developed in compliance with all applicable provisions of this Code, the Arvada City Code, and the terms of an annexation agreement that is simultaneously approved with the annexation.	Complies	The existing parcel meets all the requirements of the requested zoning district, and the site will be developed in accordance with the LDC and all other applicable codes.
3. At the time any development of the subject property is completed, there will be capacity to adequately serve residents of such area with all necessary utilities, facilities, and public services.	Complies	There are adequate services necessary to service this site.

Public Contact

Division 8-2-2 of the Land Development Code (LDC) requires that at least one neighborhood meeting be held for projects that require public hearings before the Planning Commission and City Council.

The required neighborhood meeting for this project was held on Thursday, June 12, 2025. Representatives for Barber-Nichols, City Staff, and three (3) community members were in attendance. Matt Johnson, Director of Operations for Barber-Nichols, gave a brief presentation on the history of their company, how they intend to utilize the proposed facility, and where they look to expand in the future. In addition to the presentation, handouts with a detailed description of the proposal and the proposed site plan were provided. Several questions were raised by the community members, including whether there should be any concern with the type of raw materials being processed at this plant and the projected timeframe for construction. Overall, the community members who attended the meeting were supportive and glad to see Barber-Nichols continue to operate their business in the neighborhood. The applicant also prepared a summary of the meeting, which is attached.

Written notice was sent 15 days prior to the meeting, a published notice was posted in the newspaper 15 days prior to the meeting, and a public hearing sign was posted 15 days prior to the meeting.

Commission Recommendation

The Planning Commission voted (7 to 0) to recommend approval to the City Council during their public hearing on April 1, 2026.

Strategic Alignment

This project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

SUBJECT: R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation	**PAGE:** 3 **ITEM:** 8.A.2.

Recommendation for Action

The Arvada Team recommends that the City Council Approve the Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W 56th Ave, in the City of Arvada, CO subject to the conditions in the Staff Report on Page 8.

Suggested Motion:

I move that R26-035, A Resolution Accepting an Annexation Petition for Certain Land Into the City of Arvada, Barber Nichols Plant Expansion #2, a 1.793 acre parcel of land located at 6290 W. 56th Ave, in the County of Jefferson, State of Colorado Finding Said petition Substantially Compliant with C.R.S. 31-12-107(1) and Setting a Public Hearing for June 16, 2026, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105 and is considered eligible for Annexation, be (approved) (rejected).

Prepared by:
Heidi Van Gieson, Administrative Specialist

Reviewed by:

Approved by:

Christopher Sandine, Planner II	04/10/2026
Josie Suk, Development Systems and Administrative Manager	04/14/2026
Rob Smetana, Planning Manager	04/14/2026
Jessica Garner, Director of Community and Economic Development	04/15/2026
Gail Walker, Legal Specialist-Contracts	04/15/2026
Kelsy Sargent, Assistant City Attorney	04/15/2026
Rachel Morris, City Attorney	04/18/2026
Allison Scheck, Deputy City Manager	04/18/2026
Don Wick, City Manager	04/20/2026

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R26-035

A RESOLUTION ACCEPTING AN ANNEXATION PETITION FOR CERTAIN LAND INTO THE CITY OF ARVADA, BARBER NICHOLS PLANT EXPANSION #2, A 1.793 ACRE PARCEL OF LAND LOCATED AT 6290 W. 56TH AVE, IN THE COUNTY OF JEFFERSON, STATE OF COLORADO FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1) AND SETTING A PUBLIC HEARING FOR JUNE 16, 2026, 6:15 P.M. FOR CITY COUNCIL TO DETERMINE WHETHER THE AREA MEETS THE REQUIREMENTS OF C.R.S. 31-12-104 AND 105 AND IS CONSIDERED ELIGIBLE FOR ANNEXATION

WHEREAS, the owner of certain property located in Jefferson County, Colorado, filed a petition for annexation with the City Clerk of the City of Arvada, Colorado (the "City"), for annexation of property more particularly described below (the "subject property"), into the City limits; and

WHEREAS, having received the petition for annexation, the City Council of the City of Arvada is required under the Municipal Annexation Act of 1965, as amended, to determine whether said petition is in substantial compliance with C.R.S. Sections 31-12-107 (1), 31-12-105, 31-12-104, and if so, to follow the procedure set forth in C.R.S. Sections 31-12-108 through 111; and

WHEREAS, the City Council of the City of Arvada, having examined the filings and the petition for annexation of the subject property, and being duly advised by the City planning team, finds as follows:

1. On its face, the annexation petition is in substantial compliance with C.R.S. §31-12-107(1), as the petition contains the following:

    a. An allegation that it is desirable and necessary that the area be annexed to the City of Arvada;

    b. An allegation that the requirements of §§31-12-104 and 31-12-105 C.R.S. exist or are met.

    c. An allegation that the signer of the petition comprises the landowners of more than 50 percent of the territory included in the area and own more than fifty percent of the area proposed to be annexed, exclusive of streets and alleys and any land owned by the annexing municipality.

    d. A request that the City of Arvada approve the annexation of the area proposed to be annexed.

    e. The signature of such landowner.

f. The mailing address of such signer.

g. The legal description of the land owned by such signer.

h. The date of signing of each signature.

i. The affidavit of the circulator of the petition stating that each signature therein is the signature of the person whose name it purports to be.

2. That the annexation petition was filed with an annexation map containing the following information, and is in substantial compliance with the Municipal Annexation Act:

a. A written legal description of the boundaries of the area proposed to be annexed;

b. A map showing the boundary of the area proposed to be annexed;

c. Within the annexation boundary map, a showing of the location of each ownership tract in unplatted land and, if part or all of the area is platted, the boundaries and the plat numbers of plots or of lots and blocks;

d. Next to the boundary of the area proposed to be annexed is drawn the contiguous boundary of the City of Arvada, and that the dimensions of the contiguous boundary are shown on the map.

3. That no signature on the petition is dated more than 180 days prior to the date of filing of the Petition for Annexation with the City Clerk of the City of Arvada, State of Colorado.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. That the City Council hereby makes and adopts the determinations and findings contained in the recitals set forth above and finds that the annexation petition on its face is in substantial compliance with the requirements of C.R.S. §31-12-107(1).

Section 2. That the City Council hereby accepts the annexation petition for the following described unincorporated territory, situated in the County of Jefferson and State of Colorado, to wit:

See Exhibit A of the Petition for Annexation

Section 3. That a public hearing shall be held on the 16th day of June, 2026 at 6:15 p.m. at the Arvada City Hall for the purpose of determining and finding whether the areas proposed to be annexed meet the applicable requirements of §§31-12-104 and 31-12-105 C.R.S. and are considered eligible for annexation.

Section 4. This resolution shall be effective five days after its approval by the City Council.

APPROVED AND ADOPTED this 5th day of May, 2026.

_____
Lauren Simpson, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

Publication Dates: May 7, 2026
May 14, 2026
May 21, 2026
May 28, 2026

NAME OF ANNEXATION: Barber-Nichols #2

APPROXIMATE LOCATION: 6290 W. 56th Ave.

PETITION FOR ANNEXATION OF UNINCORPORATED
TERRITORY IN THE COUNTY OF Jefferson,
STATE OF COLORADO, TO THE CITY OF ARVADA,
STATE OF COLORADO

TO THE MAYOR AND THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO: The undersigned in accordance with the Municipal Annexation Act of 1965, Chapter 31, Article 12, C.R.S. 1973, as amended, hereby petitions the City Council of the City of Arvada for annexation to the City of Arvada of the following described unincorporated territory located in the County of Jefferson, State of Colorado, to wit:

LEGAL DESCRIPTION (See Exhibit A)

In support of the said Petition, your Petitioner alleges that:

1. It is desirable and necessary that the above-described territory be annexed to the City of Arvada.
2. No less than one-sixth of the perimeter of the area proposed to be annexed is contiguous with the City of Arvada.
3. A community of interest exists between the territory proposed to be annexed and the City of Arvada.
4. The territory proposed to be annexed is urban or will be urbanized in the future.
5. The territory proposed to be annexed is integrated or is capable of being integrated with the City of Arvada.
6. No land held in identical ownership, whether consisting of one tract or parcel of real estate or two or more contiguous tracts or parcels of real estate:
   a. is divided into separate parts or parcels without the written consent of the landowner or landowners thereof.
   b. comprising twenty acres or more which, together with the buildings and improvements situated thereon, has an assessed value in excess of two-hundred thousand dollars for an ad valorem tax purpose for the year preceding the annexation is included within the territory proposed to be annexed, without the written consent of the landowner or landowners thereof.
7. No annexation proceedings have been commenced by another municipality for the annexation of part or all of the area proposed herein to be annexed to Arvada.
8. Annexation of the territory proposed to be annexed will not result in detachment of area from any school district and the attachment of the same to another school district.
9. Annexation of the area proposed to be annexed will not have the effect of extending the City of Arvada's municipal boundary more than three miles in any direction from any point of such municipal boundary in any one year.
10. No portion of a platted street or alley lies within the boundaries of the area proposed to be annexed, unless the entire width of said street or alley has been included within the boundaries of the area to be annexed.
11. The Signer(s) of the Petition comprise(s) the landowner(s) of one hundred percent of the territory included in the area proposed to be annexed, exclusive of streets and alleys and any land owned by the annexing municipality.
12. All other requirements of Section 31-12-104 and 31-12-105, C.R.S., exist or have been met.
13. The mailing address of the Signer, the legal description of the land owned by such signer, and the date of signing of such signature are all shown on this Petition.
14. Attached to this Petition is the Affidavit of Circulator of this Petition that the signature hereon is the signature of the person whose name it purports to be.

Your Petitioner(s) further request(s) that the City of Arvada approve the annexation of the area proposed to be annexed.

Owner's Signature: M. Jol

Owner's Name: MATT JOHNSON

Address: 6350 W 56TH AVE, ARVADA CO 80002

Date of signing: APRIL 7, 2026

AFFIDAVIT OF CIRCULATOR

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

Jody F. Hain Oliver, being duly sworn, upon oath, deposes and states:

1. That the affiant circulated the Petition for Annexation for the purpose of obtaining the signature(s) of the above Petitioner(s).
2. That each signature thereon is the signature of the person whose name it purports to be.

Jody F. Hain Oliver
Circulator

NOTARY CERTIFICATE

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

Subscribed and sworn to before me this 7th day of April, 2026.

(SEAL)
JODY HAIN OLIVER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017335
MY COMMISSION EXPIRES MAY 8, 2027

Witness my hand and seal: Jody F. Hain Oliver

My commission expires: 5/8/2027

EXHIBIT A

LAND DESCRIPTION (PER ABJ70849579)

THAT PART OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTER OF THE COUNTY ROAD 568.28 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 13, THENCE WEST 162.36 FEET, THENCE SOUTH 529.24 FEET, THENCE EAST 163.73 FEET, THENCE NORTH 529 FEET AND A FRACTION OF A FOOT TO THE POINT OF BEGINNING,

EXCEPT ANY PORTION LYING WITHIN WEST 56TH AVENUE AND EXCEPT A STRIP OF LAND 20 FEET OFF THE SOUTH SIDE OF SUBJECT PROPERTY, COUNTY OF JEFFERSON, STATE OF COLORADO.

LAND DESCRIPTION TAX PARCEL (AS-SURVEYED)

A PARCEL OF LAND KNOWN AS A PORTION OF THE 20-FOOT-WIDE WILLIAM M. GRAVES REMNANT PROPERTY, COUNTY PARCEL ID 39-132-00-030, SITUATED IN THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 13, MONUMENTED BY A FOUND CITY OF WHEAT RIDGE 3" BRASS CAP IN RANGE BOX, STAMPED PLS 13212 1985, AND FROM WHICH THE WEST 1/16TH CORNER BEARS N89°49'12"W, A DISTANCE OF 1319.02 FEET, AND MONUMENTED BY A FOUND 2.5" ALUMINUM CAP IN RANGE BOX, STAMPED 2003 PLS 36561, FORMING THE BASIS OF BEARINGS FOR ALL LINES DESCRIBED HEREIN, THENCE ON THE NORTH LINE OF THE NORTHEAST 1/4 OF SAID NORTHWEST 1/4, N89°49'12"W, A DISTANCE OF 568.40 FEET; THENCE S00°37'43"W, A DISTANCE OF 30.00 FEET TO A FOUND #4 REBAR WITH 1" PLASTIC CAP STAMPED GILLANS ENG PLS 13486, THENCE CONTINUING S00°37'43"W, A DISTANCE OF 479.24 FEET TO A FOUND #4 REBAR WITH 1" PLASTIC CAP STAMPED GILLANS ENG PLS 13486 AND THE POINT OF BEGINNING.

THENCE CONTINUING S00°37'43"W, A DISTANCE OF 20.00 FEET TO THE INTERSECTION WITH THE SOUTH LINE OF THE EXCEPTED STRIP FROM THE PROPERTY TO THE NORTH DESCRIBED AS A "STRIP OF LAND 20 FEET WIDE ON SOUTH FOR ROAD PURPOSES",

THENCE ON LINE PARALLEL TO AND 20-FEET SOUTH OF THE PROPERTY TO THE NORTH DESCRIBED IN DEED AT RECEPTION NO. F0205560, N89°49'15"W, A DISTANCE OF 163.67 FEET;

THENCE ON THE WEST LINE OF SAID STRIP, N00°47'39"E, A DISTANCE OF 20.00 FEET;

THENCE ON THE SOUTH LINE OF THE SAID PROPERTY TO THE NORTH, S89°49'15"E, A DISTANCE OF 163.61 FEET, CONTAINING 3,273 SQUARE FEET OR 0.075 ACRES, MORE OR LESS,

CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO.

City of Arvada
Community and Economic Development Department
PUBLIC HEARING STAFF REPORT

Barber-Nichols Plant Expansion #2
Annexation and Rezoning
DA2025-0057

NATURE OF REQUEST

Barber-Nichols has acquired the 1.793-acre parcel of land located at 6290 West 56th Avenue and is requesting annexation into the City of Arvada for utility services. Additionally, the applicant is requesting to rezone the parcel of land from Jefferson County's R-2 designation to IL (Light Industrial) in order to construct an office and manufacturing facility.

Barber-Nichols is an aerospace and defense contractor that designs, manufactures, assembles, tests, and services specialty pumps, turbines, compressors and their integrated systems. With several smaller buildings in the surrounding neighborhood, Barber-Nichols is looking to make a significant move to consolidate their machining operations and improve production efficiency. With the construction of this facility, Barber-Nichols will consolidate three existing buildings into one.

LOCATION AND HISTORY

The subject property is currently located on the south side of West 56th Avenue, between Marshall Street and Harlan Street, in unincorporated Jefferson County. A Phase I Environmental Site Assessment revealed the property was initially developed with a residential structure in 1922. Additional research shows that by 1972, the trees on the property were removed, and it was being used for the storage of trucks and equipment. Currently, the property is being used as a parking and storage lot.

NEIGHBORHOOD MEETING

Division 8-2-2 of the Land Development Code (LDC) requires that at least one neighborhood meeting be held for projects that require public hearings before the Planning Commission and City Council.

The required neighborhood meeting for this project was held on Thursday, June 12, 2025. Representatives for Barber-Nichols, City Staff, and three (3) community members were in attendance. Matt Johnson, Director of Operations for Barber-Nichols, gave a brief presentation on the history of their company, how they intend to utilize the proposed facility, and where they look to expand in the future. In addition to the presentation, handouts with a detailed description of the proposal and the proposed site plan were provided. Several questions were raised by the community members, including whether there should be any concern with the type of raw materials being processed at this plant and the projected timeframe for construction. Overall, the community members who attended the meeting were supportive and glad to see Barber-Nichols continue to operate their business in the neighborhood. The applicant also prepared a summary of the meeting, which is attached.

PUBLIC NOTIFICATION

Division 8-2-4 of the Land Development Code requires public notification for all public hearings as follows:

Written Notice: At least 15 days prior to all public hearings, written notice must be mailed to all property owners within 1,000 feet of the subject property and to all homeowner's associations and neighborhood associations with a known interest in the subject property. The applicant will provide an affidavit of mailing verifying this requirement has been met prior to the public hearing.

Posted Notice: At least 15 days prior to all public hearings, signs notifying the public of the hearing must be posted on the subject property. The applicant will provide a posting log verifying that this requirement has been met prior to the public hearing.

Published Notice: At least 15 days prior to all public hearings, notice of the hearing must be published in a newspaper of general circulation in the City. The required notice has been published.

DEVELOPMENT REVIEW TIMELINE

This application was accepted for review on October 31, 2025, and completed two (2) rounds of review following the public hearing review track.

ALIGNMENT WITH CITY COUNCIL STRATEGIC PLAN

This project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

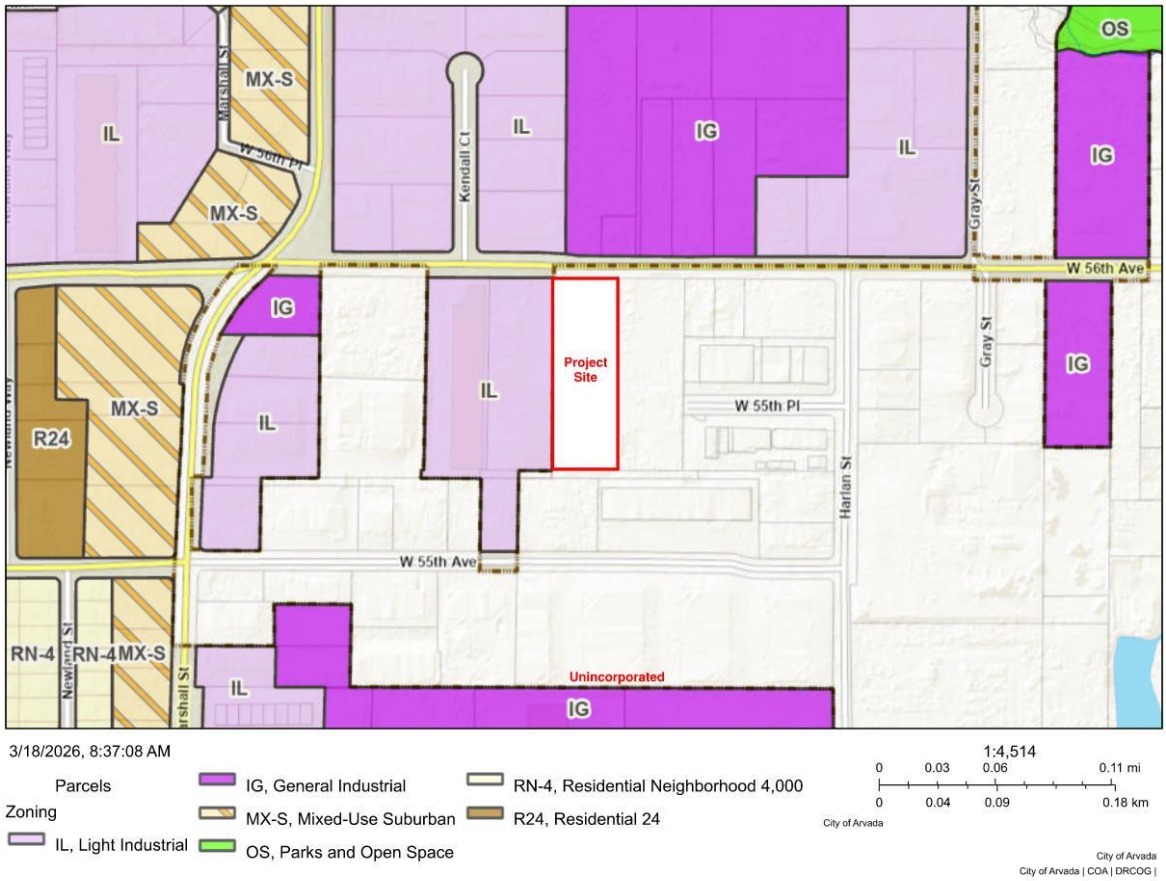
ZONING AND LAND USE

The subject property is located in unincorporated Jefferson County and currently zoned Residential-Two (R-2) which allows for single-family dwellings and duplexes. The applicant is requesting the subject property be rezoned to Light Industrial (IL) within the City of Arvada, which allows for a variety of land uses including office, manufacturing, warehousing and distribution.

Surrounding properties are zoned and utilized as follows:

Direction	Zoning	Actual Use
North	City of Arvada IG (General Industrial)	DoDo's RV Storage JKR Steed Equipment
South	Unincorporated Jefferson County I-1 (Industrial-One)	Alpha & Omega Landscapers Dent's Collision (Auto Repair Shop)
East	Unincorporated Jefferson County P-D (Planned Development)	I70 and Harlan Towing (Vehicle Storage)
West	City of Arvada IL (Light Industrial)	Office of General Contractors; Specialty Subcontractors; Tradesmen

Zoning Map



PROJECT ANALYSIS

Annexation

Annexation of property into the City of Arvada shall be in accordance with the constitution and state laws of the State of Colorado. Annexation is controlled by C.R.S. § 31-12-101, *et seq*. (the Municipal Annexation Act of 1965) and Article II, Section 30 of the Colorado Constitution.

Annexation Map

A map of the proposed area to be annexed with contiguity data demonstrating that not less than one-sixth (16.67%) of the perimeter of the area proposed to be annexed with the City of Arvada per C.R.S. 31-12-104 has been included with this application. The total contiguous perimeter exceeds the minimum required and measures approximately 37.31%.

Annexation Petition

The applicant has signed and submitted an annexation petition per the requirements outlined in C.R.S. 31-12-107.

Environmental Site Assessment
A Phase I Environmental Site Assessment has been submitted by the applicant for review. The assessment from Enviro Assessment, PC, dated September 23, 2024, revealed no recognized environmental conditions, historical recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps. Stained soils were observed within the parking area, but these were limited in extent and considered a de minimis condition. Recommendations include cleaning up the soil and utilizing improved maintenance practices to prevent additional staining.

Statement of Fire Service
The applicant has submitted a letter from the Arvada Fire Protection District (AFPD) indicating that this address will receive fire protection services from the AFPD.

Statement of Recreation Service
The applicant has submitted a letter from Apex Park and Recreation District indicating that this address is within their service area.

Severed Mineral Rights Certification
The applicant has submitted a Certification of Mineral Rights Notice and indicated that records in the office of the County Clerk and Recorder do not identify any mineral rights owners.

Water Rights Questionnaire
The applicant has submitted a Water Rights Questionnaire that indicates there was prior surface water rights appurtenant to this land for the Wadsworth-Graves Ditch Company. However, on April 14, 1982, a Warranty Water Rights Deed was signed to sell, assign, transfer, convey and set over to the City of Arvada their water rights.

Compliance with the Comprehensive Plan
The Comprehensive Plan designates this area within the Clear Creek / I-76 Community Plan, which promotes a wide range of land uses, except new residential, schools, churches, or group homes. The Clear Creek / I-76 Community Plan is an intergovernmental agreement (IGA) between the City of Arvada and Jefferson County regarding the planning and future development of an area roughly bounded by West 60th Avenue to the North, Sheridan Road to the East, West 52nd Avenue and HWY I-76 to the South, and Marshall Street / Lamar Street to the West. The general intention of the IGA is to preserve existing industrial uses, encourage future industrial development, and preserve or allow new residential uses within specified planning areas.

The following goals and policies within the Comprehensive Plan further support the development proposal:

- **Policy L-2.2:** Allow appropriate expansion of City boundaries. Consider annexation of land that includes land uses that are consistent with Comprehensive Plan goals, the long-term needs to the community and the city's service capacity.
    - The proposed annexation request is consistent with the goals of the Comprehensive Plan, as it will allow for the expansion of an existing industrial business within the City of Arvada, strengthening the existing industrial corridor.
- **Goal ED-1:** Expand and diversify the City's economic base to create primary jobs to increase the City's fiscal capacity to meet the needs of its citizens.

    - The proposed office and manufacturing facility will increase the number of primary jobs within the City's boundaries.
- **Goal ED-4:** Redevelop and revitalize existing commercial and industrial areas.
    - The proposed office and manufacturing facility will replace an existing storage yard. The proposed office and manufacturing facility will further solidify Barber-Nichols presence in the immediate industrial area.
- **Policy CC-1.3:** The City will encourage new infill development to consider and be sensible to the character of existing neighborhoods.
    - The Light Industrial (IL) land use designation is consistent with the surrounding parcels within the neighborhood. The proposed office and manufacturing facility has been designed to be compatible with the existing Barber-Nichols facility at 6350 W 56th Avenue (two parcels West of the subject parcel) and the surrounding neighborhood.

Compliance with Other Applicable Plans
The subject property is not within the jurisdiction of other applicable plans.

Setbacks
Within the IL Zoning District, the proposed structure will need to follow the applicable setback standards identified in LDC Section 2-1-6-3:

- Minimum Front: 20-feet
- Minimum Interior Side: 5-feet
- Minimum Rear: 5-feet
- Minimum Front Parking: 20-feet

The proposed Site Plan shows the structure to meet or exceed each setback standard.

Building Height
The IL Zoning District allows for a maximum height of 40-feet. The proposed structure has multiple parapet walls, with the highest parapet measuring 39-feet.

Open Space
The IL Zoning District requires a minimum of 15% of the lot to be dedicated towards the landscape surface area. The proposed Site Plan indicates the landscape surface area will be approximately 16.2%.

Building Design
The proposed building elevations show the structure to primarily be constructed of "Concrete Tilt-Up Panels" that are painted earthtone colors (white, grays, and brown). The North Exterior Elevation (front façade) will feature a significant percentage of windows, exceeding the 20% requirement along a roadway. The East, West, and South Elevations include breaks within the tilt-up panels, along with color and parapet height variations for visual interest. Several overhead doors are located along the West Exterior Elevation to provide vehicular access to the interior of the building.



Perspective 3D Rendering of the Front Entrance (North Façade)

Circulation and Connectivity
The subject parcel has direct access to West 56th Avenue, a portion of which is included within the annexation request. An Access and Fire Lane Easement is being proposed with the neighboring property owner at 6340 West 56th Avenue. The applicant is required to construct a five-foot sidewalk along the frontage of the subject parcel, along with providing bike racks for alternative transportation users.

Grading and Drainage
A proposed grading plan has been submitted for review with the Site Plan. Underground detention is proposed within the parking drive aisle to accommodate on-site stormwater. Additional grading and drainage will be evaluated in greater detail through the Site Plan request.

Utility Services
Water and sewer services will be provided by the City of Arvada.

Police and Fire Protection
The City of Arvada will provide police protection to this site and the Arvada Fire Protection District will provide fire protection services.

LAND DEVELOPMENT CODE APPROVAL CRITERIA

It is the responsibility of the applicant to justify the requested land use application. The Planning Commission should make a recommendation to the City Council based on its findings regarding the approval criteria shown in the table(s) below and upon testimony heard during the public hearing as it applied to the criteria.

Staff performed an analysis of the proposal, based on the approval criteria listed in Section 8 of the Land Development Code, and presents the following findings:

Div. 8-3-3 Annexation and Disconnection Approval Criteria		Finding	Rationale
1.	The annexation is in accord with the Comprehensive Plan and the best interests of the City would be served by annexation of the subject property.	Complies	The annexation area is included within the Comprehensive Plan Future Land Use map and consistent with the Clear Creek / I-76 Community Plan.
2.	The property is capable of being integrated into the City and developed in compliance with all applicable provisions of this Code, the Arvada City Code, and the terms of an annexation agreement that is simultaneously approved with the annexation.	Complies	The existing parcel meets all the requirements of the requested zoning district, and the site will be developed in accordance with the LDC and all other applicable codes.
3.	At the time any development of the subject property is completed, there will be capacity to adequately serve residents of such area with all necessary utilities, facilities, and public services.	Complies	There are adequate services necessary to service this site.

Div. 8-3-4 Zoning and Rezoning Approval Criteria		Finding	Rationale
1.	The rezoning is consistent with the Arvada Comprehensive Plan, or an adopted sub-area plan, corridor plan, or urban renewal plan, or reflects conditions that have changed since the adoption of the Comprehensive Plan.	Complies	The proposed IL (Light Industrial) zoning designation is consistent with the Clear Creek / I-76 Community Plan designation of the Comprehensive Plan Future Land Use Map.
2.	The intended land use is consistent with the stated intent of the proposed zoning district.	Complies	Light industry land uses (including office and manufacturing facilities) are consistent with the proposed zoning district. The purpose of the Light Industrial (IL) zoning district is to provide areas for light manufacturing, assembly and fabrication uses, office, research, food and beverage processing, packaging, or bottling, and compatible recreational activities.
3.	Facilities and services (including sewage and waste disposal, water, gas, electricity, police and fire protection, and roads and transportation, as applicable) will, prior to development, be available to serve the subject property while maintaining adequate levels of service to existing development.	Complies	Facilities and services, including water, sewer, fire, and police, are available to serve the property.

4.	The intended land use for which the rezoning is sought will not result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated.	Complies	The intended light industry land use will not adversely impact the existing conditions of the surrounding site.
5.	The rezoning is consistent with the character of existing or planned development on adjacent properties and in the surrounding area or neighborhood, or measures will be taken to substantially buffer or otherwise substantially mitigate any negative impacts.	Complies	The proposed IL Zoning District is consistent with the adjacent properties, including the neighboring Jefferson County I-1 (Industrial-One) and P-D zoning designations.

STAFF RECOMMENDATION

Based upon project analysis and review of the Land Development Code approval criteria, staff recommends **approval** of the Barber-Nichols Plant Expansion #2 Annexation and Rezoning.

The Planning Commission may recommend denial of the request(s) if it cannot make affirmative findings of the approval criteria stated above.

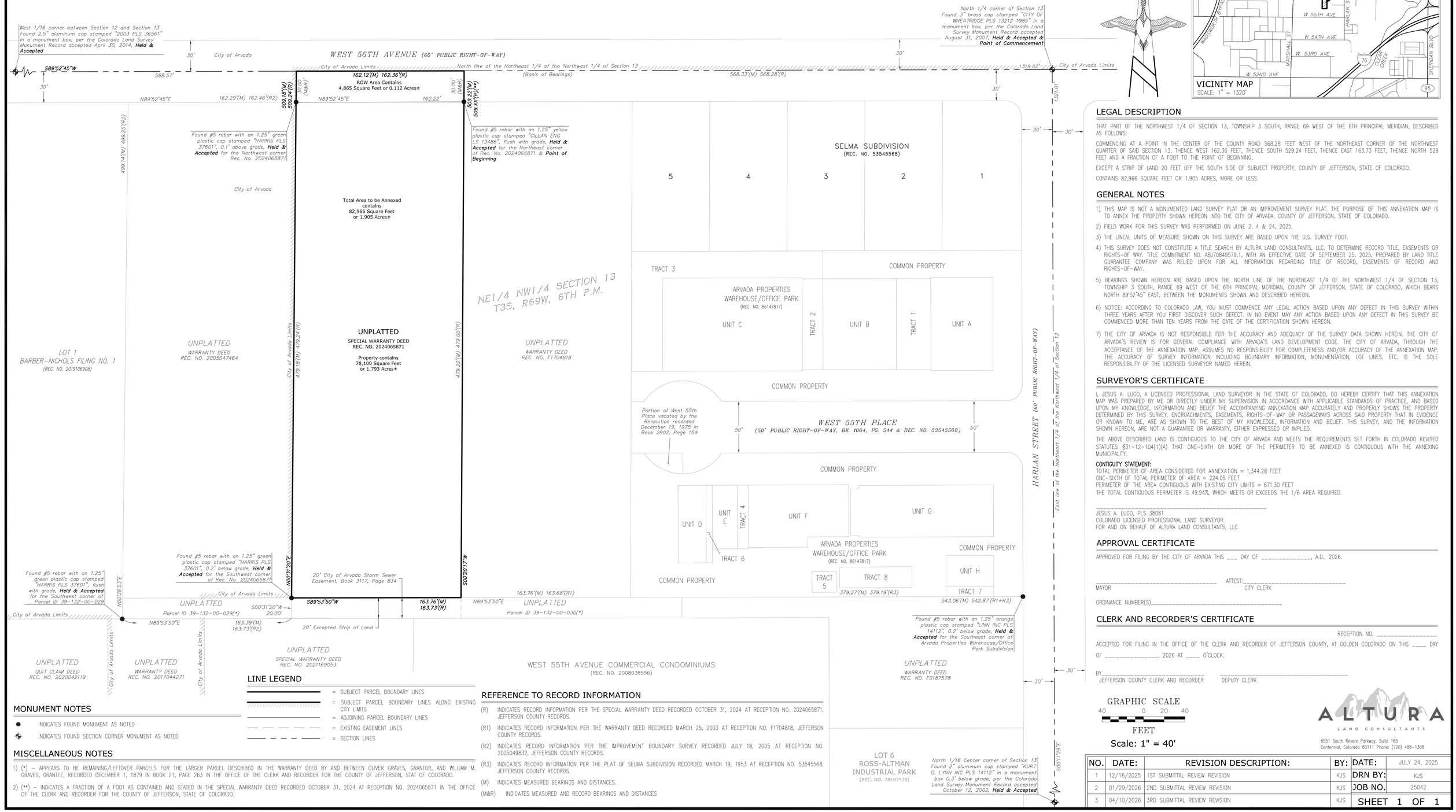
BARBER-NICHOLS NO. 2 ANNEXATION MAP

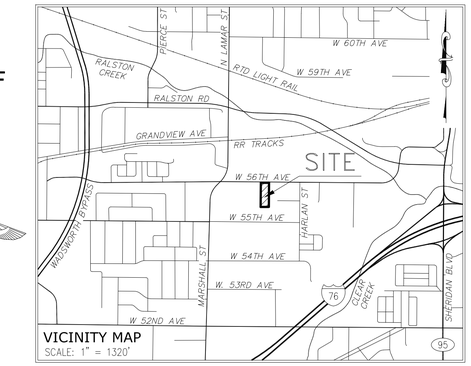
LOCATED IN THE NORTHEAST 1/4 OF OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO

SHEET 1 OF 1

ABBREVIATION LEGEND

REC. NO.	RECEPTION NUMBER
P.L.S.	PROFESSIONAL LAND SURVEYOR
L.S.	LAND SURVEYOR
R.O.W.	RIGHT-OF-WAY
Δ	CURVE DELTA/CENTRAL ANGLE
R	CURVE RADIUS
L	CURVE ARC LENGTH
CHB	CURVE CHORD BEARING
CH	CURVE CHORD LENGTH





LEGAL DESCRIPTION

THAT PART OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTER OF THE COUNTY ROAD 568.28 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 13, THENCE WEST 162.36 FEET, THENCE SOUTH 529.24 FEET, THENCE EAST 163.73 FEET, THENCE NORTH 529 FEET AND A FRACTION OF A FOOT TO THE POINT OF BEGINNING,

EXCEPT A STRIP OF LAND 20 FEET OFF THE SOUTH SIDE OF SUBJECT PROPERTY, COUNTY OF JEFFERSON, STATE OF COLORADO.

CONTAINS 82,966 SQUARE FEET OR 1.905 ACRES, MORE OR LESS.

GENERAL NOTES

1) THIS MAP IS NOT A MONUMENTED LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT. THE PURPOSE OF THIS ANNEXATION MAP IS TO ANNEX THE PROPERTY SHOWN HEREON INTO THE CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO.
2) FIELD WORK FOR THIS SURVEY WAS PERFORMED ON JUNE 2, 4 & 24, 2025.
3) THE LINEAL UNITS OF MEASURE SHOWN ON THIS SURVEY ARE BASED UPON THE U.S. SURVEY FOOT.
4) THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY ALTURA LAND CONSULTANTS, LLC. TO DETERMINE RECORD TITLE, EASEMENTS OR RIGHTS-OF-WAY. TITLE COMMITMENT NO. ABJ70849579.1, WITH AN EFFECTIVE DATE OF SEPTEMBER 25, 2025, PREPARED BY LAND TITLE GUARANTEE COMPANY WAS RELIED UPON FOR ALL INFORMATION REGARDING TITLE OF RECORD, EASEMENTS OF RECORD AND RIGHTS-OF-WAY.
5) BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO, WHICH BEARS NORTH 89°52'45" EAST, BETWEEN THE MONUMENTS SHOWN AND DESCRIBED HEREON.
6) NOTICE: ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
7) THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE SURVEY DATA SHOWN HEREIN. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH ARVADA'S LAND DEVELOPMENT CODE. THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THE ANNEXATION MAP, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THE ANNEXATION MAP. THE ACCURACY OF SURVEY INFORMATION INCLUDING BOUNDARY INFORMATION, MONUMENTATION, LOT LINES, ETC. IS THE SOLE RESPONSIBILITY OF THE LICENSED SURVEYOR NAMED HEREIN.

SURVEYOR'S CERTIFICATE

I, JESUS A. LUGO, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS ANNEXATION MAP WAS PREPARED BY ME OR DIRECTLY UNDER MY SUPERVISION IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE, AND BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF THE ACCOMPANYING ANNEXATION MAP ACCURATELY AND PROPERLY SHOWS THE PROPERTY DETERMINED BY THIS SURVEY. ENCROACHMENTS, EASEMENTS, RIGHTS-OF-WAY OR PASSAGEWAYS ACROSS SAID PROPERTY THAT IN EVIDENCE OR KNOWN TO ME, ARE AS SHOWN TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY, AND THE INFORMATION SHOWN HEREON, ARE NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

THE ABOVE DESCRIBED LAND IS CONTIGUOUS TO THE CITY OF ARVADA AND MEETS THE REQUIREMENTS SET FORTH IN COLORADO REVISED STATUTES §31-12-104(1)(A) THAT ONE-SIXTH OR MORE OF THE PERIMETER TO BE ANNEXED IS CONTIGUOUS WITH THE ANNEXING MUNICIPALITY.

CONTIGUITY STATEMENT:
TOTAL PERIMETER OF AREA CONSIDERED FOR ANNEXATION = 1,344.28 FEET
ONE-SIXTH OF TOTAL PERIMETER OF AREA = 224.05 FEET
PERIMETER OF THE AREA CONTIGUOUS WITH EXISTING CITY LIMITS = 671.30 FEET
THE TOTAL CONTIGUOUS PERIMETER IS 49.94%, WHICH MEETS OR EXCEEDS THE 1/6 AREA REQUIRED.

_____
JESUS A. LUGO, PLS 38081
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF ALTURA LAND CONSULTANTS, LLC

APPROVAL CERTIFICATE

APPROVED FOR FILING BY THE CITY OF ARVADA THIS ___ DAY OF _____, A.D., 2026.

_____ ATTEST:_____
MAYOR CITY CLERK

ORDINANCE NUMBER(S)_____

CLERK AND RECORDER'S CERTIFICATE

RECEPTION NO. _____

ACCEPTED FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF JEFFERSON COUNTY, AT GOLDEN COLORADO ON THIS ____ DAY OF _____, 2026 AT ____ O'CLOCK.

BY_____ _____
JEFFERSON COUNTY CLERK AND RECORDER DEPUTY CLERK

LINE LEGEND

- = SUBJECT PARCEL BOUNDARY LINES
- = SUBJECT PARCEL BOUNDARY LINES ALONG EXISTING CITY LIMITS
- = ADJOINING PARCEL BOUNDARY LINES
- = EXISTING EASEMENT LINES
- = SECTION LINES

MONUMENT NOTES

- ● INDICATES FOUND MONUMENT AS NOTED
- ⊕ INDICATES FOUND SECTION CORNER MONUMENT AS NOTED

REFERENCE TO RECORD INFORMATION

(R) INDICATES RECORD INFORMATION PER THE SPECIAL WARRANTY DEED RECORDED OCTOBER 31, 2024 AT RECEPTION NO. 2024065871, JEFFERSON COUNTY RECORDS.

(R1) INDICATES RECORD INFORMATION PER THE WARRANTY DEED RECORDED MARCH 25, 2003 AT RECEPTION NO. F1704818, JEFFERSON COUNTY RECORDS.

(R2) INDICATES RECORD INFORMATION PER THE IMPROVEMENT BOUNDARY SURVEY RECORDED JULY 18, 2005 AT RECEPTION NO. 2005049832, JEFFERSON COUNTY RECORDS.

(R3) INDICATES RECORD INFORMATION PER THE PLAT OF SELMA SUBDIVISION RECORDED MARCH 19, 1953 AT RECEPTION NO. 53545568, JEFFERSON COUNTY RECORDS.

(M) INDICATES MEASURED BEARINGS AND DISTANCES.

(M&R) INDICATES MEASURED AND RECORD BEARINGS AND DISTANCES

MISCELLANEOUS NOTES

1) (*) – APPEARS TO BE REMAINING/LEFTOVER PARCELS FOR THE LARGER PARCEL DESCRIBED IN THE WARRANTY DEED BY AND BETWEEN OLIVER GRAVES, GRANTOR, AND WILLIAM M. GRAVES, GRANTEE, RECORDED DECEMBER 1, 1879 IN BOOK 21, PAGE 263 IN THE OFFICE OF THE CLERK AND RECORDER FOR THE COUNTY OF JEFFERSON, STAT OF COLORADO.
2) (**) – INDICATES A FRACTION OF A FOOT AS CONTAINED AND STATED IN THE SPECIAL WARRANTY DEED RECORDED OCTOBER 31, 2024 AT RECEPTION NO. 2024065871 IN THE OFFICE OF THE CLERK AND RECORDER FOR THE COUNTY OF JEFFERSON, STATE OF COLORADO.

GRAPHIC SCALE
40 0 20 40
FEET
Scale: 1" = 40'

ALTURA LAND CONSULTANTS
6551 South Revere Parkway, Suite 165
Centennial, Colorado 80111 Phone: (720) 488-1308

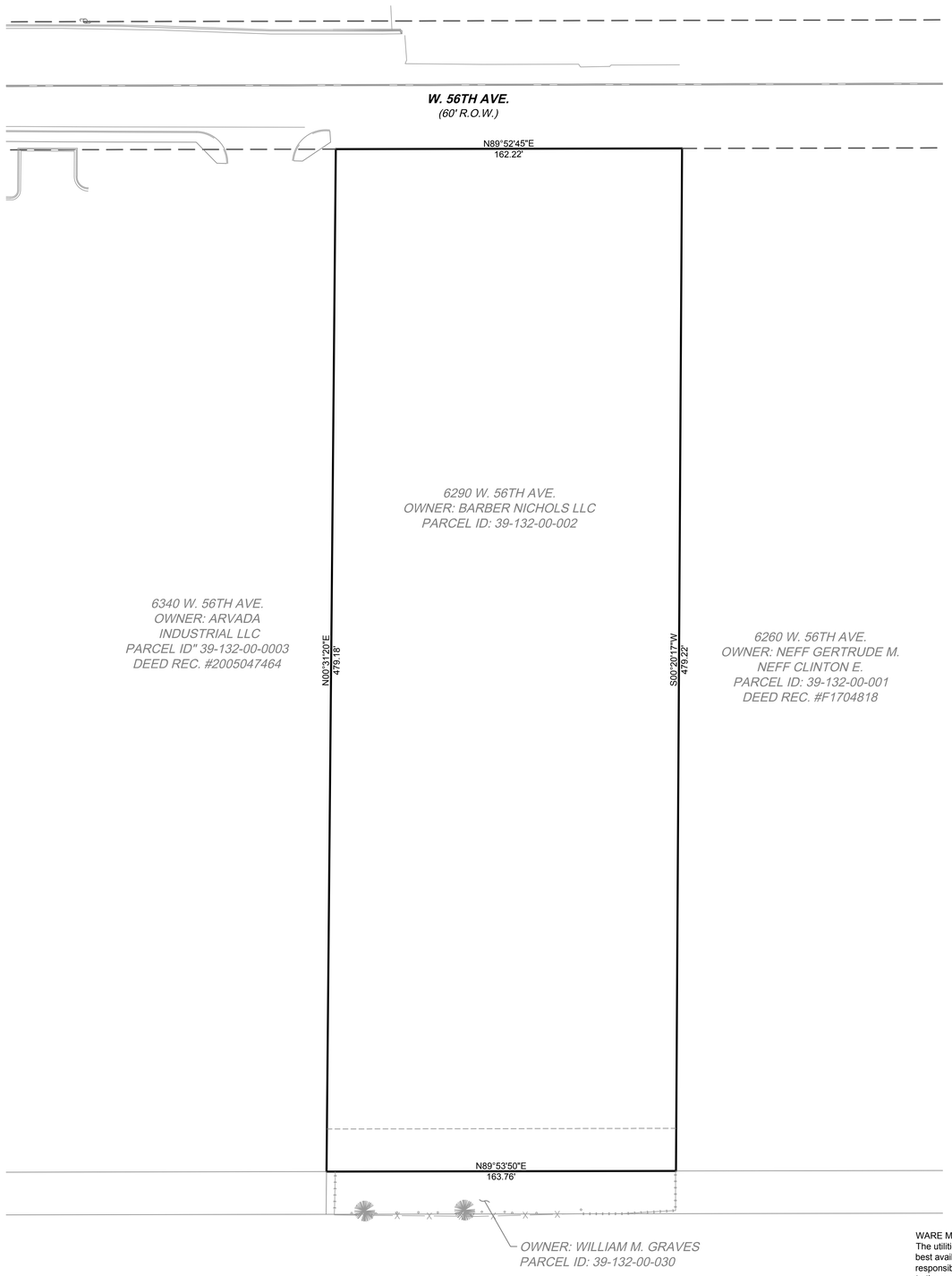
NO.	DATE:	REVISION DESCRIPTION:	BY:	DATE:	JULY 24, 2025
1	12/16/2025	1ST SUBMITTAL REVIEW REVISION	KJS	DRN BY:	KJS
2	01/29/2026	2ND SUBMITTAL REVIEW REVISION	KJS	JOB NO.	25042
3	04/10/2026	3RD SUBMITTAL REVIEW REVISION	KJS	SHEET 1 OF 1	

CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT

BARBER NICHOLS #2

REZONING PLAN

SITUATED IN THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
COUNTY JEFFERSON, STATE OF COLORADO



SITE DATA

PARCEL NUMBER: 39-132-00-002

TOTAL SITE AREA: 1.793 ACRES (78,100 SQUARE FEET)

EXISTING ZONING CLASSIFICATION/USE: RESIDENTIAL

PROPOSED ZONING CLASSIFICATION/USE: LIGHT INDUSTRIAL

LEGAL DESCRIPTION:

THAT PART OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTER OF THE COUNTY ROAD 568.28 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 13, THENCE WEST 162.36 FEET, THENCE SOUTH 529.24 FEET, THENCE EAST 163.73 FEET, THENCE NORTH 529 FEET AND A FRACTION OF A FOOT TO THE POINT OF BEGINNING,

EXCEPT ANY PORTION LYING WITHIN WEST 56TH AVENUE AND

EXCEPT A STRIP OF LAND 20 FEET OFF THE SOUTH SIDE OF SUBJECT PROPERTY, COUNTY OF JEFFERSON, STATE OF COLORADO.

WARE MALCOMB assumes no responsibility for utility locations. The utilities shown on this drawing have been plotted from the best available information. It is, however, the contractors responsibility to field verify the location of all utilities prior to the commencement of any construction.

ARVADA JOB NO. DA-2025-0057

P:\DEN\25000600\Civil\CAD\Sheets\Rezoning\DEN25-0006_Rezoning Plan.dwg 12/17/2025 6:44 AM ICONTRERAS 1:1

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF WARE MALCOMB AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH WARE MALCOMB. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF WARE MALCOMB PRIOR TO THE COMMENCEMENT OF ANY WORK.

WARE MALCOMB
CIVIL ENGINEERING & SURVEYING
900 south broadway
suite 320
denver, co 80209
p 303.561.3333
waremalcomb.com

FOR AND ON BEHALF
OF WARE MALCOMB

REZONING PLAN
BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

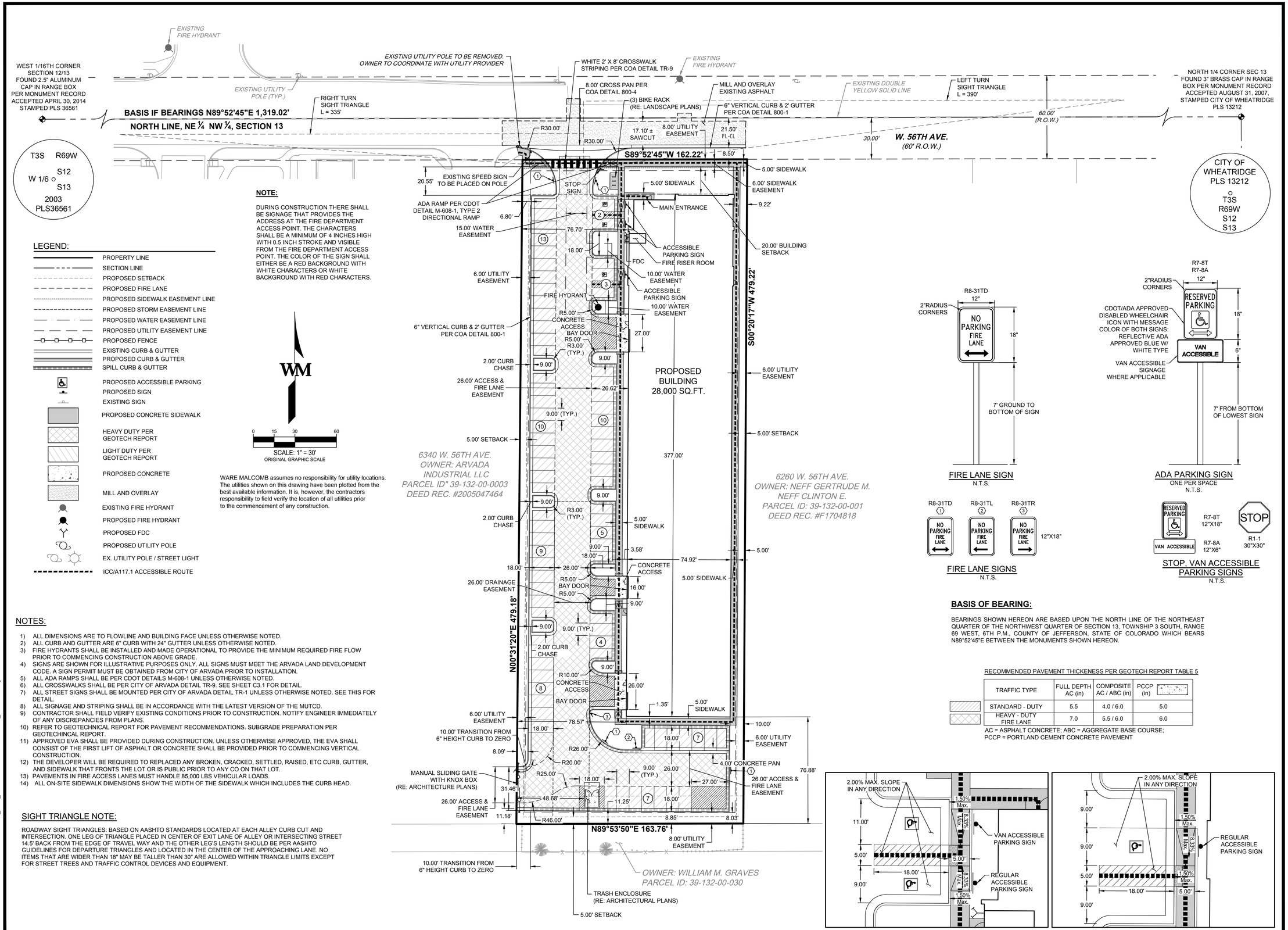
NO	DATE	REMARKS
1	10/24/2025	1ST DEVELOPMENT APPLICATION SUBMITTAL
2	12/16/2025	2ND DEVELOPMENT APPLICATION SUBMITTAL

JOB NO.:	DEN25-0006
PA / PM:	C. STRAWN
DESIGNED:	I. CONTRERAS
DATE:	07/24/2025
PLOT DATE:	12/16/2025

SHEET
1
Sheet 1 of 1

NOT FOR CONSTRUCTION

CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT



NOTE:

DURING CONSTRUCTION THERE SHALL BE SIGNAGE THAT PROVIDES THE ADDRESS AT THE FIRE DEPARTMENT ACCESS POINT. THE CHARACTERS SHALL BE A MINIMUM OF 4 INCHES HIGH WITH 0.5 INCH STROKE AND VISIBLE FROM THE FIRE DEPARTMENT ACCESS POINT. THE COLOR OF THE SIGN SHALL EITHER BE A RED BACKGROUND WITH WHITE CHARACTERS OR WHITE BACKGROUND WITH RED CHARACTERS.

LEGEND:

- PROPERTY LINE
- SECTION LINE
- PROPOSED SETBACK
- PROPOSED FIRE LANE
- PROPOSED SIDEWALK EASEMENT LINE
- PROPOSED STORM EASEMENT LINE
- PROPOSED WATER EASEMENT LINE
- PROPOSED UTILITY EASEMENT LINE
- PROPOSED FENCE
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- SPILL CURB & GUTTER
- PROPOSED ACCESSIBLE PARKING
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED CONCRETE SIDEWALK
- HEAVY DUTY PER GEOTECH REPORT
- LIGHT DUTY PER GEOTECH REPORT
- PROPOSED CONCRETE
- MILL AND OVERLAY
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED FDC
- PROPOSED UTILITY POLE
- EX. UTILITY POLE / STREET LIGHT
- ICC/A117.1 ACCESSIBLE ROUTE

WARE MALCOMB assumes no responsibility for utility locations. The utilities shown on this drawing have been plotted from the best available information. It is, however, the contractors responsibility to field verify the location of all utilities prior to the commencement of any construction.

NOTES:

1) ALL DIMENSIONS ARE TO FLOWLINE AND BUILDING FACE UNLESS OTHERWISE NOTED.
2) ALL CURB AND GUTTER ARE 6" CURB WITH 24" GUTTER UNLESS OTHERWISE NOTED.
3) FIRE HYDRANTS SHALL BE INSTALLED AND MADE OPERATIONAL TO PROVIDE THE MINIMUM REQUIRED FIRE FLOW PRIOR TO COMMENCING CONSTRUCTION ABOVE GRADE.
4) SIGNS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ALL SIGNS MUST MEET THE ARVADA LAND DEVELOPMENT CODE. A SIGN PERMIT MUST BE OBTAINED FROM CITY OF ARVADA PRIOR TO INSTALLATION.
5) ALL ADA RAMPS SHALL BE PER CDOT DETAILS M-608-1 UNLESS OTHERWISE NOTED.
6) ALL CROSSWALKS SHALL BE PER CITY OF ARVADA DETAIL TR-9. SEE SHEET C3.1 FOR DETAIL.
7) ALL STREET SIGNS SHALL BE MOUNTED PER CITY OF ARVADA DETAIL TR-1 UNLESS OTHERWISE NOTED. SEE THIS FOR DETAIL.
8) ALL SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE MUTCD.
9) CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES FROM PLANS.
10) REFER TO GEOTECHNICAL REPORT FOR PAVEMENT RECOMMENDATIONS. SUBGRADE PREPARATION PER GEOTECHINCAL REPORT.
11) APPROVED EVA SHALL BE PROVIDED DURING CONSTRUCTION. UNLESS OTHERWISE APPROVED, THE EVA SHALL CONSIST OF THE FIRST LIFT OF ASPHALT OR CONCRETE SHALL BE PROVIDED PRIOR TO COMMENCING VERTICAL CONSTRUCTION.
12) THE DEVELOPER WILL BE REQUIRED TO REPLACED ANY BROKEN, CRACKED, SETTLED, RAISED, ETC CURB, GUTTER, AND SIDEWALK THAT FRONTS THE LOT OR IS PUBLIC PRIOR TO ANY CO ON THAT LOT.
13) PAVEMENTS IN FIRE ACCESS LANES MUST HANDLE 85,000 LBS VEHICULAR LOADS.
14) ALL ON-SITE SIDEWALK DIMENSIONS SHOW THE WIDTH OF THE SIDEWALK WHICH INCLUDES THE CURB HEAD.

SIGHT TRIANGLE NOTE:

ROADWAY SIGHT TRIANGLES: BASED ON AASHTO STANDARDS LOCATED AT EACH ALLEY CURB CUT AND INTERSECTION. ONE LEG OF TRIANGLE PLACED IN CENTER OF EXIT LANE OF ALLEY OR INTERSECTING STREET 14.5' BACK FROM THE EDGE OF TRAVEL WAY AND THE OTHER LEG'S LENGTH SHOULD BE PER AASHTO GUIDELINES FOR DEPARTURE TRIANGLES AND LOCATED IN THE CENTER OF THE APPROACHING LANE. NO ITEMS THAT ARE WIDER THAN 18" MAY BE TALLER THAN 30" ARE ALLOWED WITHIN TRIANGLE LIMITS EXCEPT FOR STREET TREES AND TRAFFIC CONTROL DEVICES AND EQUIPMENT.

FIRE LANE SIGN
N.T.S.

ADA PARKING SIGN
ONE PER SPACE
N.T.S.

FIRE LANE SIGNS
N.T.S.

STOP, VAN ACCESSIBLE PARKING SIGNS
N.T.S.

BASIS OF BEARING:

BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST, 6TH P.M., COUNTY OF JEFFERSON, STATE OF COLORADO WHICH BEARS N89°52'45"E BETWEEN THE MONUMENTS SHOWN HEREON.

RECOMMENDED PAVEMENT THICKENESS PER GEOTECH REPORT TABLE 5

TRAFFIC TYPE	FULL DEPTH AC (in)	COMPOSITE AC / ABC (in)	PCCP (in)
STANDARD - DUTY	5.5	4.0 / 6.0	5.0
HEAVY - DUTY FIRE LANE	7.0	5.5 / 6.0	6.0

AC = ASPHALT CONCRETE; ABC = AGGREGATE BASE COURSE;
PCCP = PORTLAND CEMENT CONCRETE PAVEMENT

ACCESSIBLE PARKING DETAIL
(SCALE: 1" = 10')

ACCESSIBLE PARKING DETAIL
(SCALE: 1" = 10')

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FOR AND ON BEHALF OF WARE MALCOMB

SITE PLAN
BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

NO	DATE	REMARKS
1	10/24/2025	1ST DEVELOPMENT APPLICATION SUBMITTAL
2	12/16/2025	2ND DEVELOPMENT APPLICATION SUBMITTAL

JOB NO.:	DEN25-0006
PA / PM:	C. STRAWN
DESIGNED:	I. CONTRERAS
DATE:	07/24/2025
PLOT DATE:	12/10/2025

SHEET
C2.0

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NOT FOR CONSTRUCTION

P:\DEN25000\000\Civil\CAD\Sheets\CD\DEN25-0006_C3.0_Horizontal Control Plan - C2.0_Site Plan.dwg 12/21/2025 11:31 AM ICONTRERAS 1:1

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D-Series Size 2
LED Wall Luminaire

d^series

Catalog Number
Notes
Type

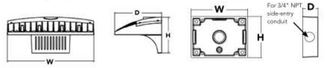
Hit the Tab key or mouse over the page to see all interactive elements.

Specifications
Luminaire

Width:	18-1/2" (47.0 cm)	**Weight:**	21 lbs (9.9 kg)
Depth:	10" (25.4 cm)		
Height:	7-5/8" (19.4 cm)		

Back Box (BBW)

Width:	5-1/2" (14.0 cm)	**BBW Weight:**	1 lbs (0.9 kg)
Depth:	1-1/2" (3.8 cm)		
Height:	4" (10.2 cm)		



Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSXW2 LED P2 40K 70CRI T3M MVOLT SRM DDBTXD

DSXW2 LED

Series	Lumen Package	CCT	CRI	Distribution	Voltage	Mounting	Control Options
DSXW2 LED	P1 4200 Lumens P2 5300 Lumens P3 6100 Lumens P4 7200 Lumens P5 8200 Lumens P6 10000 Lumens P7 14300 Lumens	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K 57K 5700K AMBPC Amber PC[1] AMBLW Amber LW[1]	70CRI 70CRI 80CRI 80CRI[1] AMCRI Amber CRI	T2S Type 2 Short T2M Type 2 Medium T3LG Type 3 Low Glare[1] T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium BLC3 Back Light Control Type 3[1] BLC4 Back Light Control Type 4[1]	MVOLT 120[1] 208[1] 240[1] 277[1] 347[3,4] 480[3,4] HVOLT[3]	**Shipped included** SRM Surface mounting bracket **Shipped separately**[10] BBW Surface-mounted back box (for conduit entry)	**Shipped installed** PE Photoelectric cell, button type[1] PER NEMA twist-lock receptacle only (control ordered separately)[2] PER5 Five-wire receptacle only (control ordered separately)[2,5] PER7 Seven-wire receptacle only (control ordered separately)[2,5] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht[10,11] PIRH 180° motion/ambient light sensor, 15-30' mtg ht[10,11] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[11,12] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[11,12]

Other Options		Finish (required)			
Shipped installed		DDBXD Dark bronze	DSSXD Sandstone	DWHGXD Textured white	
SF Single fuse (120, 277, 347V)[1]	**Shipped separately**[10]	DBLXD Black	DDBTXD Textured dark bronze	DSSTXD Textured sandstone	
DF Double fuse (208, 240, 480V)[1]	BSW Bird-deterrent spikes	DNAXD Natural aluminum	DBLBXD Textured black		
HS House-side shield	VG Vandal guard	DWHXD White	DNATXD Textured natural aluminum		
SPD Separate surge protection[13]					

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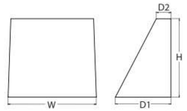
WDGE1 LED
Architectural Wall Sconce

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1):	5.5"
Depth (D2):	1.5"
Height:	8"
Width:	9"
Weight: (without options)	9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

design select Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI) P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P0 P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[1]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[2] **Shipped separately** AWS 3/8inch Architectural wall spacer[4] PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.[4]

Options		Finish		
E4WH Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)[1]	DDBXD Dark bronze	DSSXD Sandstone	DDBTXD Textured dark bronze	DWHGXD Textured white
PE Photocell, Button Type[2]	DBLXD Black		DBLBXD Textured black	
DS Dual-switching (comes with 2 drivers and 2 light engines; see page 3 for details)[3]	DNAXD Natural aluminum		DNATXD Textured natural aluminum	
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD White		DWHGXD Textured white	
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.			DSSTXD Textured sandstone	
DSLE Dual Switching (1 Driver, 2 Light Engines)				
CCE Coastal Construction[4]				

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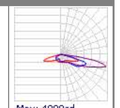
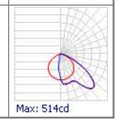
Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	F1		12	Lithonia Lighting	DSXW2 P4 35K 80CRI T4M	7000 3500K 80CRI Type 4 Medium	1	6516	0.9	49.2	 Max: 4990cd
	F2		4	Lithonia Lighting	WDGE1 LED P0 35K 80CRI VF	WDGE1 LED WITH P0 - PERFORMANCE PACKAGE, 3500K, 80CRI, VISUAL COMFORT FORWARD OPTIC	1	738	0.9	6.7947	 Max: 514cd

Luminaire Locations

Label	MH	Orientation	Tilt
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	180.00	5.00
F2	15.00	90.00	0.00
F2	15.00	270.00	0.00
F2	15.00	270.00	0.00
F2	15.00	270.00	0.00
F1	15.00	180.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00
F1	15.00	270.00	5.00

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 1	X	1.0 fc	3.0 fc	0.1 fc	30.0:1	10.0:1
Calc Zone	+	0.9 fc	4.1 fc	0.0 fc	N/A	N/A



Plan View
Scale - 1" = 25ft

GENERAL NOTES

1. 1. SIGNAGE LIGHTING SHALL BE APPROVED AS PART OF A SEPARATE SIGN PERMIT.
2. LUMINAIRES SHALL BE SHIELDED AND DIRECTED TO AVOID GLARE AND OVERSPILL ONTO ADJACENT PROPERTY.

2.1. ALL EXTERIOR LIGHT FIXTURES SHALL BE FULL CUTOFF FIXTURES THAT ARE DIRECTED DOWNWARD (90 DEGREES FROM TRUE VERTICAL) AND SHALL HAVE FLAT LENSES, EMITTING NO MORE THAN 10 PERCENT OF THE TOTAL LUMENS BETWEEN 80 AND 90 DEGREES FROM TRUE VERTICAL. FIXTURES SHALL BE CONFIGURED SO THAT LIGHTS DO NOT CAUSE GLARE

2.2. ALL LIGHT FIXTURES ON STRUCTURES, POLES, BOLLARDS, STANDS, OR MOUNTED ON A BUILDING SHALL HAVE A SHIELD, ADJUSTABLE REFLECTOR, AND/OR NON–PROTRUDING DIFFUSER TO SHIELD THE LIGHT SOURCE FROM SIGHT FROM ADJACENT RESIDENTIAL ZONING DISTRICTS.

3. MOTION–ACTIVATED SECURITY LIGHTING SHALL BE TIMED TO TURN OFF AFTER NOT MORE THAN FIVE MINUTES AFTER MOTION ACTIVATION.
4. WALL PACKS ON THE EXTERIOR OF THE BUILDING SHALL BE FULLY SHIELDED (E.G., TRUE CUT–OFF TYPE BULB OR LIGHT SOURCE NOT VISIBLE FROM OFF–SITE) TO DIRECT THE LIGHT VERTICALLY DOWNWARD
5. ONE HOUR AFTER THE CLOSE OF BUSINESS, ALL ILLUMINATION SHALL BE REDUCED BY AT LEAST 70 PERCENT, AND REMAIN IN THAT STATE UNTIL AT LEAST ONE HOUR PRIOR TO OPEN OF BUSINESS. THIS REDUCTION IN ILLUMINATION MAY BE ACHIEVED BY DIMMING THE LAMPS WITHIN A LIGHT FIXTURE (LUMINAIRE), AND/OR TURNING OFF A LUMINAIRE OR A PORTION OF A MULTI–LUMINAIRE ASSEMBLAGE. THIS DOES NOT APPLY TO RESIDENTIAL USES.

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FOR AND ON BEHALF OF WARE MALCOMB

SITE PLAN
BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

PHOTOMETRIC PLAN AND DETAILS

NO.	DATE	REMARKS
1	10/24/2025	1ST DEVELOPMENT APPLICATION SUBMITTAL
2	12/16/2025	2ND DEVELOPMENT APPLICATION SUBMITTAL

JOB NO.:	DEN25-0006
PA / PM:	C. STRAWN
DESIGNED:	I. CONTRERAS
DATE:	07/24/2025
PLOT DATE:	10/10/2025

SHEET
E1.1

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NOT FOR CONSTRUCTION

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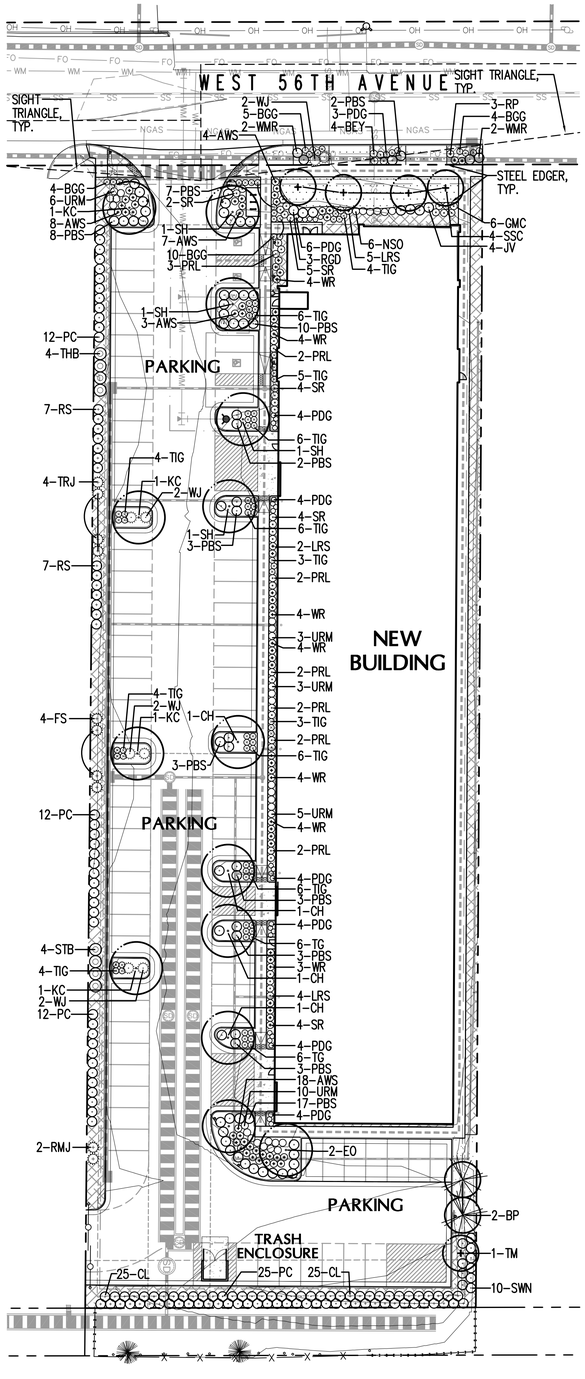


LANDSCAPE LEGEND

- NEW DECIDUOUS SHADE TREE
- NEW EVERGREEN TREE
- NEW DECIDUOUS ORNAMENTAL TREE
- NEW DECIDUOUS SHRUBS
- NEW EVERGREEN SHRUBS
- NEW ORNAMENTAL GRASSES
- NEW STEEL EDGER, SEE LANDSCAPE NOTE #8, SHEET L1.2

GROUNDCOVER LEGEND

Irrigated 'Nature's Choice' Seed Mix:
(572 s.f.– 5% of total landscape area)

NAME	%MIX
Sheeps Fescue	15%
Ephraim Crested Wheatgrass	70%
Hard Fescue	10%
Kentucky Bluegrass	5%

Irrigated Tall Grass Seed Mix:
(403 s.f.– 3% of total landscape area)

NAME	%MIX
Western Wheatgrass 'Arriba'	12%
Thick Spike Wheatgrass 'Critana'	18%
Side Oats Grama	12%
Blue Grama	25%
Little Bluestem	16%
Prairie Sandreed 'Goshen'	12%
Sand Dropseed	5%

Specified 1" Crushed Granite
Rock Mulch over Specified
Filter Fabric

LANDSCAPE CALCULATIONS

Required by Article 4.6: Landscaping and Buffering

SITE AREA (GROSS) 78,077 S.F.
TOTAL LANDSCAPE AREA (14%) 11,173 S.F.

BUFFERYARD LANDSCAPE OPTION D

EAST BUFFERYARD 72 L.F.
- TREES REQUIRED: 1
- SHRUBS REQUIRED: 10
- TREES PROVIDED: 1
- SHRUBS PROVIDED: 10

WEST BUFFERYARD 433 L.F.
- TREES REQUIRED: 17
- SHRUBS REQUIRED: 43
- TREES PROVIDED: 18
- SHRUBS PROVIDED: 50

SOUTH BUFFERYARD 164 L.F.
- TREES REQUIRED: 7
- SHRUBS REQUIRED: 16
- TREES PROVIDED: 0*
- SHRUBS PROVIDED: 75

PER CODE SECTION 4.6.5.3
* DUE TO EXISTING STORM SEWER, 7 TREES REPLACED WITH 59 SHRUBS AND TWO TREES TO BE LOCATED AT SOUTHEAST LANDSCAPE AREA.

ROW BUFFER OPTION D

BUFFER LENGTH 94 L.F.
- TREES REQUIRED: 4
- SHRUBS REQUIRED: 10
- TREES PROVIDED: 4
- SHRUBS PROVIDED: 10

PER CODE SECTION 4.6.5.3

STREET TREES

ROW LENGTH 94 L.F.
- TREES REQUIRED: 2
- TREES PROVIDED: 0*

PER CODE SECTION 4.6.6.1
* DUE TO EXISTING STORM SEWER, STREET TREES HAVE BEEN REPLACED WITH SHRUB PLANTINGS

PARKING AREA LANDSCAPE

SURFACE PARKING LOT 31,125 S.F.
PARKING AREA LANDSCAPE (6%) 1,819 S.F.
- TREES REQUIRED: 6
- SHRUBS REQUIRED: 48
- TREES PROVIDED: 11
- SHRUBS PROVIDED: 52

PER CODE SECTION 4.6.6.3

FOUNDATION PLANTINGS

NORTH FOUNDATION 72 L.F.
- SHRUBS REQUIRED: 14
- SHRUBS PROVIDED: 14

WEST FOUNDATION 373 L.F.
- SHRUBS REQUIRED: 75
- SHRUBS PROVIDED: 80

SOUTH FOUNDATION 75 L.F.
- SHRUBS REQUIRED: 15
- SHRUBS PROVIDED: 16

EAST FOUNDATION 373 L.F.
- SHRUBS REQUIRED: 0*
- SHRUBS PROVIDED: 0*

PER CODE SECTION 4.6.6.4
* EXEMPTION DUE TO STORM UTILITY EASEMENT AND AREA DETRIMENTAL TO PLANTINGS.

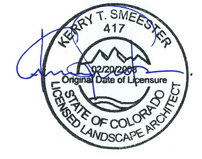
GENERAL LANDSCAPE AREA

LANDSCAPE AREA 412 S.F.
VEGETATIVE AREA 96%
- TREES REQUIRED: 1
- TREES PROVIDED: 1

PER CODE SECTION 4.6.6.5

PLANT PALETTE

QTY.	SYM.	COMMON/ BOTANIC NAME	SIZE	MATURE H/W	COMMENTS
14		DECIDUOUS SHADE TREES			
4	SH	Shademaster Honeylocust Gleditsia triacanthos 'Shademaster'	2" cal.	45'/35'	Specimen quality, full crown, B&B, staked
4	KC	Kentucky Coffeetree DECAF Gymnocladus dioicus DECAF	2" cal.	45'/35'	Specimen quality, full crown, B&B, staked
2	EO	English Oak Quercus robur	2" cal.	50'/35'	Specimen quality, full crown, B&B, staked
4	CH	Chicagoland Hackberry Celtis occidentalis 'Chicagoland'	2" cal.	55'/45'	Specimen quality, full crown, B&B, staked
13		ORNAMENTAL TREES			
1	TM	Tatarian Maple Acer tataricum HOT WINGS	1–1/2" cal.	18'/15'	Specimen quality, clump form, B&B, staked
4	THB	Tall Hedge Buckthorn Frangula alnus 'Columnaris'	1–1/2" cal.	12'/3.5'	Specimen quality, full crown, B&B, staked
4	STB	SILVER TOTUM Buffaloberry Shepherdia argentea 'Totem'	1–1/2" cal.	12'/3'	Specimen quality, full crown, B&B, staked
4	SSC	Spring Snow Crabapple Malus 'Spring Snow'	1–1/2" cal.	20'/20'	Specimen quality, full crown, B&B, staked
12		EVERGREEN TREES			
2	BP	Mint Truffle Bosnian Pine Pinus leucodermis 'Mint Truffle'	6' ht.	12'/10'	Specimen quality, full form, B&B, guyed
2	RMJ	Woodward Rocky Mountain Juniper Juniperus scopulorum 'Woodward'	6' ht.	15'/3'	Specimen quality, full form, B&B, guyed
4	FS	Fastigiate Spruce Picea pungens 'Blue Totum'	6' ht.	15'/4'	Specimen quality, full form, B&B, guyed
4	TRJ	Taylor Redcedar Juniper Juniperus virginana 'Taylor'	6' ht.	15'/4'	Specimen quality, full form, B&B, guyed
329		DECIDUOUS SHRUBS			
34	AWS	Anthony Waterer Spirea Spiraea 'Anthony Waterer'	5 gal.	2.5'/3'	container, 5 canes min. plant 3' o.c.
4	BEY	Bright Edge Yarrow Yucca filimentosa 'Bright Edge'	5 gal.	2.5'/3'	container, 5 canes min. plant 3' o.c.
3	RP	Rose Peashrub Caragana rosea	5 gal.	3'/3'	container, 5 canes min. plant 3' o.c.
16	LRS	Little Spire Russian Sage Perovskia atriplicifolia 'Little Spire'	5 gal.	2.5'/2.5'	container, 5 canes min. plant 3' o.c.
27	WR	Winnipeg Parks Rose Rosa 'Winnepeg Parks'	5 gal.	2'/2'	container, 5 canes min. plant 3' o.c.
15	PRL	Purple Reblooming Lilac Syringa x bloomerang	5 gal.	5'/5'	container, 5 canes min. plant 3' o.c.
19	SR	Morden Sunrise Shrub Rose Rosa 'Morden Sunrise'	5 gal.	3'/2.5'	container, 5 canes min. plant 3' o.c.
6	GMC	Green Mound Currant Ribes alpinum 'Green Mound'	5 gal.	3.5'/2.5'	container, 5 canes min. plant 3' o.c.
4	WMR	White Meidiland Shrub Rose Rosa 'Meidiland White'	5 gal.	2'/3'	container, 5 canes min. plant 4' o.c.
59	PBS	Pawnee Buttes Sandcherry Prunus besseyi 'Pawnee Buttes'	5 gal.	2'/5'	container, 5 canes min. plant 4' o.c.
4	JV	Judd Viburnum Viburnum x juddii	5 gal.	5'/5'	container, 5 canes min. plant 4' o.c.
3	RGD	Red Gnome Dogwood Cornus alba 'Red Gnome'	5 gal.	3.5'/4.5'	container, 5 canes min. plant 4' o.c.
14	RS	Russian Sage Perocskia atriplicifolia	5 gal.	3.5'/3.5'	container, 5 canes min. plant 4' o.c.
50	CL	Chinese Lilac Syringa chinensis	5 gal.	10'/8'	container, 5 canes min. plant 4' o.c.
61	PC	Peking Cotoneaster Cotoneaster lucidus	5 gal.	8'/8'	container, 5 canes min. plant 4' o.c.
10	SWN	Summer Wine Ninebark Physocarpus opulifolius 'Summer Wine'	5 gal.	5'/5'	container, 5 canes min. plant 4' o.c.
8		EVERGREEN SHRUBS			
8	WJ	Wilton Juniper Juniperous horizontalis 'Wiltonii'	5 gal.	6"/7'	container, 24" spread plant 5' o.c.
161		ORNAMENTAL GRASSES			
36	PDG	Dwarf Prairie Dropseed Grass Sporobolus heterolepis 'Tara'	1 gal.	24"/24"	container, plant 24" o.c.
69	TIG	Thin Man Indian Grass Sorgastrum nutans 'Thin Man'	1 gal.	5'/30"	container, plant 30" o.c.
23	BGG	Blonde Ambition Blue Grama Bouteloua gracilis 'Blonde Ambition'	1 gal.	28"/24"	container, plant 30" o.c.
6	NSO	Northern Sea Oats Chasmanthium latifolium	1 gal.	30"/24"	container, plant 36" o.c.
27	URM	Undaunted Ruby Muhly Muhlenbergia reverchonii 'Undaunted'	1 gal.	30"/24"	container, plant 36" o.c.



REFER TO SHEET L1.2 FOR LANDSCAPE NOTES & DETAILS

NORTH

0 15 30 60'
SCALE: 1"=30'-0"

WARE MALCOMB
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900 south broadway
suite 320
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p 303.561.3333
waremalcomb.com

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site design
landscape architecture
site planning
700 colorado boulevard, suite 131
denver, colorado 80206
303.512.0549 www.meuran.com
FOR AND ON BEHALF OF WARE MALCOMB

SITE PLAN
BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

LANDSCAPE PLAN

NO.	DATE	REMARKS
1	10/24/2025	1ST SITE PLAN SUBMITTAL
2	12/17/2025	2ND SITE PLAN SUBMITTAL

JOB NO.:	25.108
PA / PM:	KTS
DESIGNED:	KTS
DATE:	7/24/2025
PLOT DATE:	10/20/2025

SHEET
L1.1

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C:\Design\Barber Nichols #2 FDP.dwg

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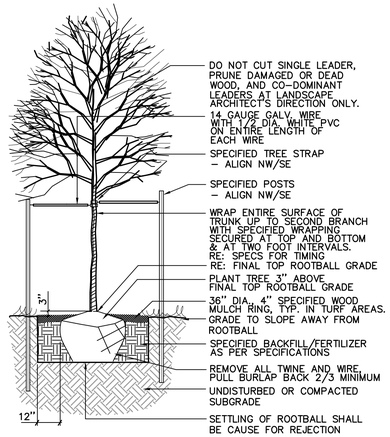
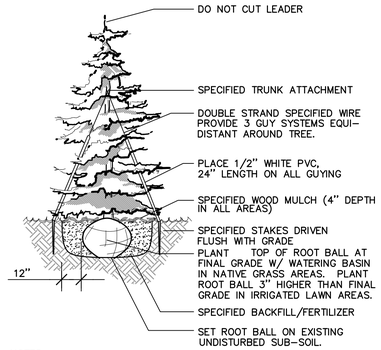


1 DECIDUOUS TREE PLANTING

N.T.S.

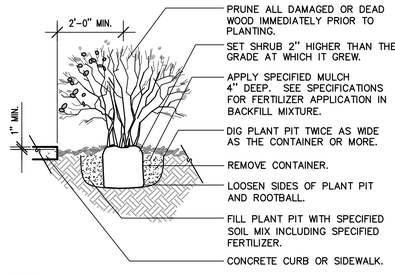


NOTES:

1. INSTALL SPECIFIED MULCH TO DRIPLINE OF TREE WHERE PLANTED IN GRASS AREAS.
2. DO NOT PROVIDE WATER BASIN IN IRRIGATED LAWN AREAS.

2 EVERGREEN TREE PLANTING

N.T.S.

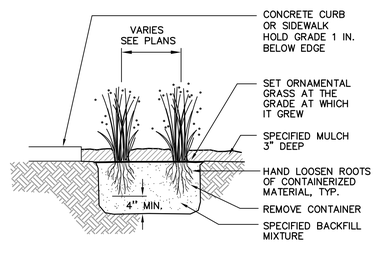


NOTES:

1. ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED. REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS.
2. HOLD GRADE 1" BELOW EDGE OF WALK OR CURB. THIS DETAIL SHALL ALSO APPLY TO PERENNIAL FLOWERS IN CONTAINER.
3. ALL JUNIPER PLANTS SHOULD BE PLANTED SO TOP OF ROOT MASS OCCURS AT FINISH GRADE OF MULCH LAYER.

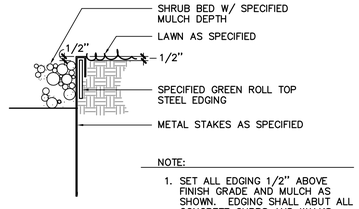
3 SHRUB PLANTING DETAIL

N.T.S.



4 ORNAMENTAL GRASS DETAIL

N.T.S.



NOTE:

1. SET ALL EDGING 1/2" ABOVE FINISH GRADE AND MULCH AS SHOWN. EDGING SHALL ABUT ALL CONCRETE CURBS AND WALKS PERPENDICULAR AND FLUSH W/ GRADES OF CONCRETE. ALL JOINTS TO BE SECURELY STAKED.

5 STEEL EDGER DETAIL

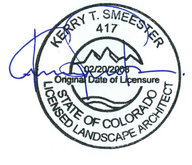
N.T.S.

LANDSCAPE NOTES

1. THIS LANDSCAPE ARCHITECTURAL SITE PLAN IS TO BE USED IN CONJUNCTION WITH THE EXISTING CIVIL, MECHANICAL, ELECTRICAL, ARCHITECTURAL, AND IRRIGATION AS-BUILT SITE PLANS TO FORM COMPLETE INFORMATION REGARDING THIS SITE.
2. ALL IRRIGATED LANDSCAPE AREAS SHALL BE ROTOTILLED WITH CLASS 1 ORGANIC COMPOST AT A RATE OF 4 CUBIC YARDS PER 1,000 SQUARE FEET. THIS PREPARATION SHALL BE THOROUGHLY INCORPORATED INTO THE THE TOP 6" OF SOIL.
3. ALL DECIDUOUS AND EVERGREEN TREES ARE TO BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. ANY PLANT NOT MEETING THE LANDSCAPE ARCHITECT'S APPROVAL WILL BE REJECTED AT ANY TIME PRIOR TO FINAL ACCEPTANCE.
4. ALL TREES TO BE STAKED OR GUYED AS PER PLANT LIST AND DETAILS.
5. ALL TREE AND SHRUB BED LOCATIONS ARE TO BE STAKED OUT ON SITE FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
6. ALL SHRUB/ORNAMENTAL GRASS BEDS SHALL BE MULCHED WITH 4" DEPTH SPECIFIED 3/4" CRUSHED GRANITE ROCK MULCH OVER SPECIFIED FILTER FABRIC.
7. ALL SHRUB BEDS WITH SLOPED AREAS GREATER OR EQUAL THAN 3:1 HAVE 6" DEPTH 3"-6" ROUNDED RIVER COBBLE OVER SPECIFIED FILTER FABRIC.
8. ALL NEW SHRUB BEDS AND MULCH AREAS ARE TO BE CONTAINED WITH SPECIFIED ROLL TOP STEEL EDGER (NOT REQUIRED AT CURB, WALKS OR BUILDING). PLACE STEEL EDGER BETWEEN ALL ROCK AND WOOD MULCH BEDS.
9. ALL NEW LANDSCAPE AREAS, INCLUDING THE TEMP-IRRIGATED SEED, WILL BE WATERED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. ALL TURF AREAS LESS THAN 8' IN WIDTH SHALL HAVE A SUB-SURFACE OR LOW VOLUME IRRIGATION SYSTEM. ALL TURF AREAS BETWEEN 8' AND 15' IN WIDTH SHALL HAVE LOW-ANGLE SPRAY NOZZLES DESIGNED FOR THE SPECIFIED WIDTH. ALL TURF AREAS GREATER THAN 15' SHALL BE IRRIGATED WITH GEAR-DRIVEN ROTORS WITH LOW ANGLE NOZZLES ON SEPARATE STATIONS. ALL SPRAY HEADS SHALL BE PRESSURE REDUCING DESIGNED TO PREVENT LOW HEAD DRAINAGE. ALL IRRIGATED SOD AND SEED AREAS SHALL BE SEPARATELY ZONED. ALL NEW TREES IN THE TEMP-IRRIGATED AND EXISITNG NATIVE SEED AREAS WILL HAVE A SEPARATELY ZONED DRIP SYSTEM PROVIDING FULL WATER COVERAGE. ALL SHRUB BEDS SHALL BE IRRIGATED WITH A SEPARATELY ZONED DRIP SYSTEM PROVIDING FULL COVERAGE TO EACH PLANT. A RAIN SENSOR SYSTEM SHALL BE INCLUDED IN THE NEW IRRIGATION SYSTEM. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AN IRRIGATION SYSTEM DESIGN AND SUBMITTALS FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
11. ALL PLANTS SHALL BE MAINTAINED CONTINUALLY IN A HEALTHY CONDITION IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL HORTICULTURAL STANDARDS AND PRCTICES. PLANTS THAT DIE OR ARE UNHEALTHY SHALL BE REPLACED. REGULAR PRUNING AND TRIMMING SHALL APPLY TO MAINTAIN HEALTH AND AN ATTRACTIVE APPEARANCE AND TO PERMIT THE PLANTS TO ACHIEVE THEIR INTENDED FORM AND HEIGHT. LANDSCAPE AREAS SHALL REMAIN FREE OF WEEDS, LITTER, JUNK, RUBBISH AND OTHER NUISANCES AND AND OBSTRUCTIONS. TO PREVENT WEED GROWTH, EROSION AND BLOWING DUST, AREAS NOT COVERED BY VEGETATION SHALL BE COVERED WITH MULCH, WOOD OR BARK CHIPS, OR DECORATIVE ROCKS OR COBBLE, OR SIMILAR NATURAL MATERIALS PROVIDING A CLEAN, UNIFORM APPEARANCE.

CITY OF ARVADA LANDSCAPE NOTES

1. Site shall be landscaped prior to issuance of a final Certificate of Occupancy (CO) during the growing season of April 1st to October 1st, at all other times the individual sites shall be landscaped within 45 (forty-five) days of the start of the following growing season.
2. Landscape Maintenance
   a. All plants shall be maintained continually in a healthy condition in accordance with generally accepted professional horticultural standards and practices. Plants that die or are unhealthy shall be replaced according to the approved landscape plan.
   b. Regular pruning and trimming shall be performed to maintain health and an attractive appearance and to permit the plants to achieve their intended form and height.
   c. All landscape areas shall be kept free of weeds, litter and trash and all irrigation systems shall be properly maintained.
3. All landscape areas shall be irrigated with underground automatic irrigation system. Trees, shrubs, and decorative grasses will be irrigated by a separate zone from sod/grass; this includes trees planted in sod/grass area. The irrigation system is to have a rain sensor shut-off installed.
4. Landscaping that lies within site triangles shall not grow to be over 2'-6" in height.
5. Trees and landscaping within developments, when fully mature, shall provide an unobstructed vertical clearance of 13'- 6"and provide the minimum unobstructed fire apparatus access road width as required based on the height of the building.
6. Trees shall not be planted closer than 10 feet to any sewer or water line, meters, and vaults. Tree planting shall be coordinated with Xcel Energy. Locations of all utilities shall be verified in the field prior to planting.



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700 colorado boulevard, suite 131
denver, colorado 80206
303.512.0549 www.meuran.com
FOR AND ON BEHALF OF WARE MALCOMB

SITE PLAN
BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

LANDSCAPE DETAILS

NO.	DATE	REMARKS
1	10/24/2025	1ST SITE PLAN SUBMITTAL
2	12/11/2025	2ND SITE PLAN SUBMITTAL

JOB NO.:	25.108
PA / PM:	KTS
DESIGNED:	KTS
DATE:	7/24/2025
PLOT DATE:	10/20/2025

SHEET
L1.2

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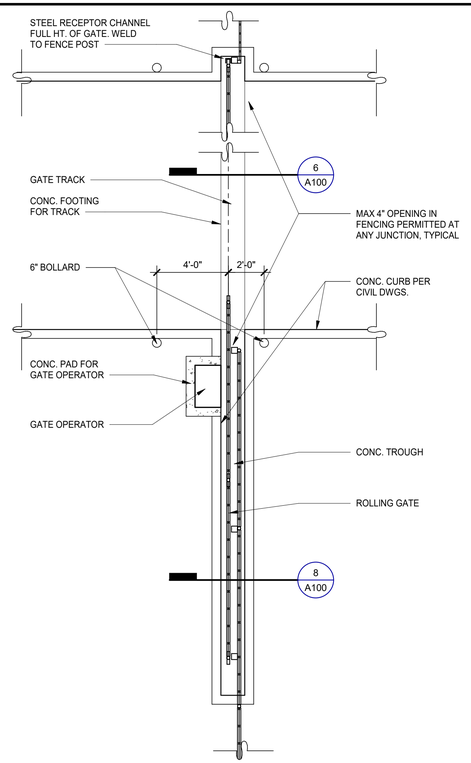
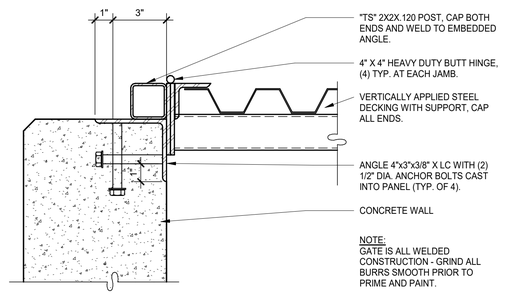


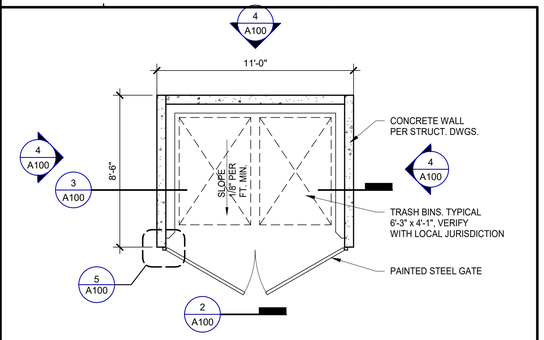
SLIDING GATE - PLAN

SCALE: 1/4" = 1'-0" (10)



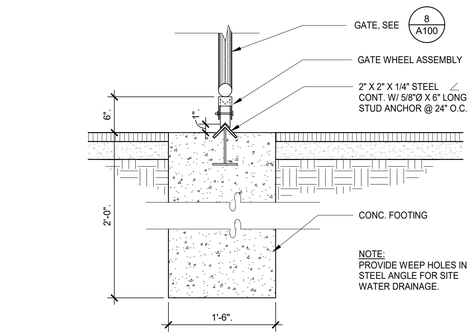
TRASH GATE JAMB AT CONCRETE

SCALE: 3" = 1'-0" (5)



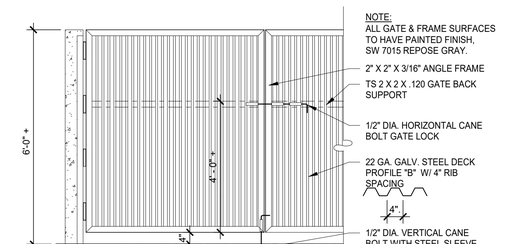
TRASH ENCLOSURE PLAN

SCALE: 1/4" = 1'-0" (1)



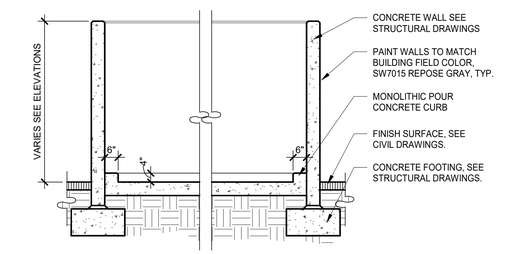
SLIDING GATE - TRACK

SCALE: 3/4" = 1'-0" (6)



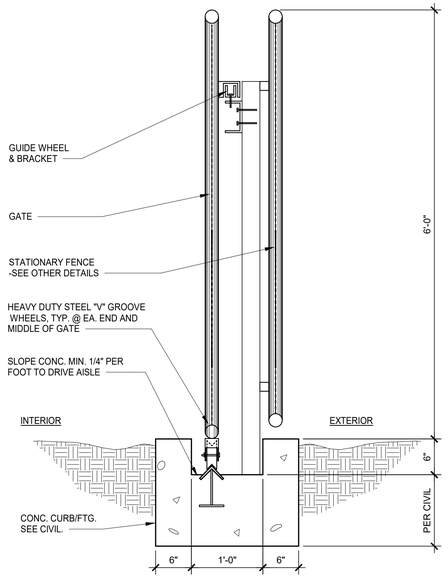
TRASH ENCLOSURE GATE

SCALE: 1/2" = 1'-0" (2)



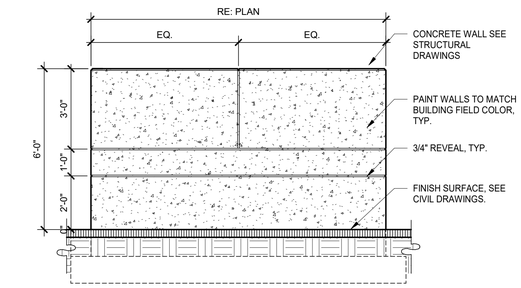
TRASH ENCLOSURE SECTION

SCALE: 3/8" = 1'-0" (3)



SLIDING GATE - SECTION

SCALE: 1" = 1'-0" (8)



TRASH ENCLOSURE ELEVATION

SCALE: 3/8" = 1'-0" (4)

WARE MALCOMB
900 S Broadway, Suite 320
Denver, CO 80209
P 720.488.2626
CIVIL ENGINEERING
MEP / STRUCTURAL ENGINEERING
BUILDING MEASUREMENT
ARCHITECTURE
INTERIORS
BRANDING

SITE PLAN

BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

TRASH ENCLOSURE ELEVATIONS AND GATE DETAILS

	DATE	REMARKS
1	10/24/2025	1ST DEVELOPMENT APP. SUBMITTAL
2	12/16/2025	2ND DEVELOPMENT APP. SUBMITTAL

JOB NO.:	DEN25-0006-00
PA/PM:	BW
DRAWN BY.:	QDN
DATE:	12/16/2025
PLOT DATE:	12/16/2025

SHEET
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Autodesk Docs://DEN25-0006-00_Barber Nichols Building #2/0006_ARCH.rvt

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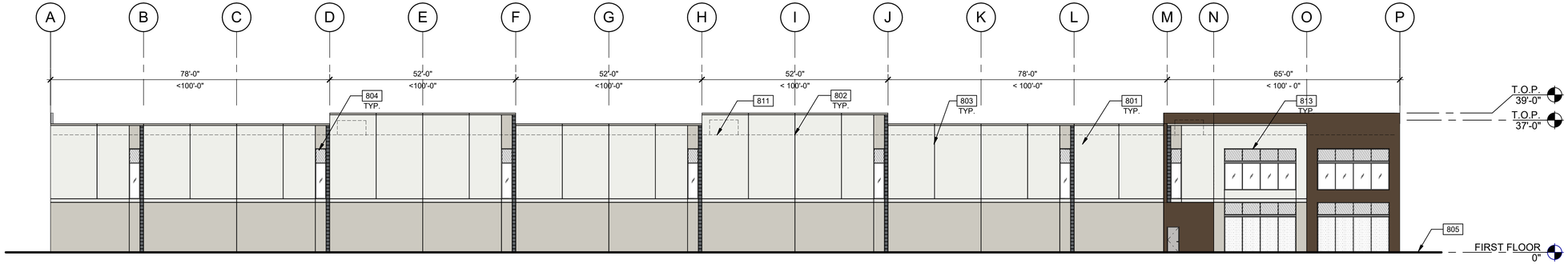
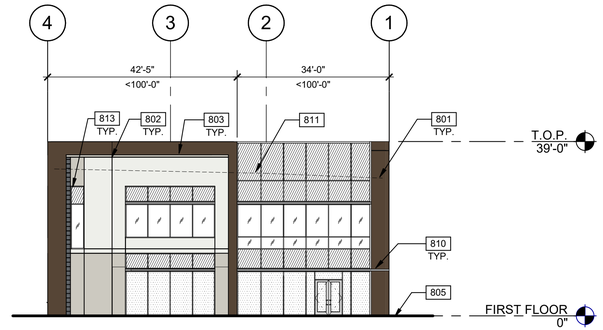


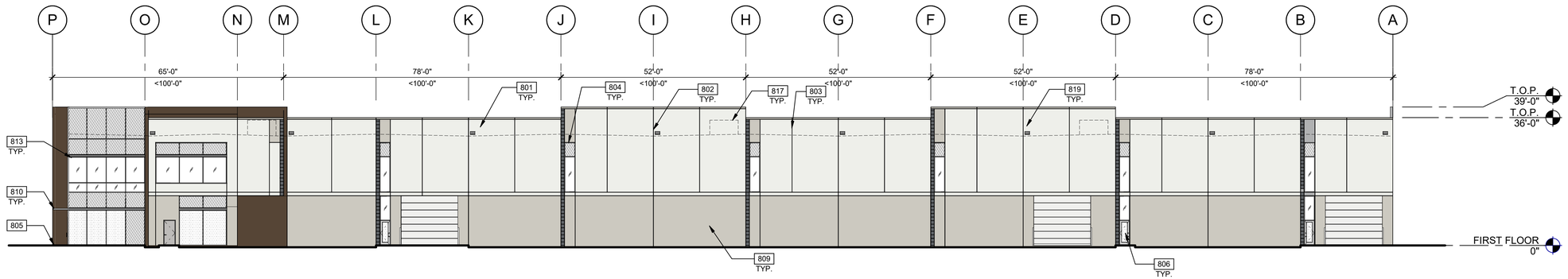
EAST EXTERIOR ELEVATION 1

SCALE: 1/16" = 1'-0"



NORTH EXTERIOR ELEVATION 2

SCALE: 1/16" = 1'-0"



WEST EXTERIOR ELEVATION 3

SCALE: 1/16" = 1'-0"

KEYNOTES:

801	CONCRETE TILT-UP PANEL,PAINTED.
802	CONCRETE TILT-UP PANEL JOINT, SEALED, TO MATCH PANEL COLOR
803	3/4" V-REVEAL.
804	ALUMINUM STORE FRONT SYSTEM WITH 1" THICK LOW-E INSULATED GLAZING.
805	FINISH GRADE VARIES, SEE CIVIL DRAWINGS.
806	STOREFRONT ENTRY DOOR
809	12'x14' OVERHEAD DOOR PREFINISHED WHITE.
810	PAINTED CLOSED STEEL CANOPY.
811	ROOF LINE BEYOND
813	WINDOW WITH THERMALLY BROKEN ALUMINUM STOREFRONT WITH 1" INSULATED SOLAR GRAY GLAZING.
817	ROOF TOP MECH. UNIT
819	OVERFLOW SCUPPER.

LEGEND

GLASS:

VISION GLASS

SPANDREL GLASS

TEMPERED GLASS

ALL GLASS USED ON THE ENVELOPE OF THE BUILDING TO BE:
1" INSULATED SOLARBAND 60

GLASS WIND LOAD RESISTANCE CALCULATIONS ARE UNDER SEPARATE PERMIT

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW.

ALL WALLS TO BE PAINTED WITH BASE COLOR U.O.N.

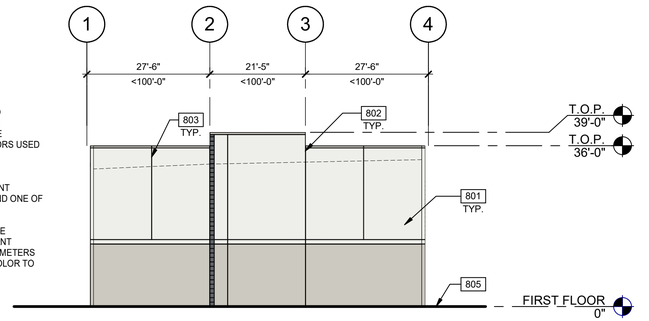
- BASE COLOR: SW 7006 EXTRA WHITE
- SECONDARY COLOR: SW 7015 REPOSE GRAY
- ACCENT COLOR: SW 7041 VAN DYKE BROWN
- ACCENT COLOR: SW7075 WEB GRAY

NOTES:

ROOFTOP MECHANICAL EQUIPMENT AND APPURTENANCES SHOULD ALL BE SCREENED FROM A PUBLIC STREET THROUGH THE USE OF PARAPETS OR ENCLOSURES THAT ARE EQUAL TO, OR GREATER THAN, THE HEIGHT OF THE EQUIPMENT TO BE SCREENED. THE PARAPET OR ENCLOSURE SHALL USE ONE OF THE PREDOMINANT MATERIALS OR COLORS USED ON THE PRIMARY FAÇADE OF THE BUILDING.

ALL AIR CONDITIONING COMPRESSORS SHALL BE COMPLETELY SCREENED. IF A SCREENING ENCLOSURE IS USED, IT SHALL UTILIZE AT LEAST ONE OF THE PREDOMINANT MATERIALS USED ON THE FACADE OF THE PRIMARY STRUCTURE, WHERE FEASIBLE, AND ONE OF THE PREDOMINANT COLORS USED ON THE PRIMARY STRUCTURE.

ALL ROOFTOP AND WALL VENTS AND FLUES ON A PITCHED ROOF OR EXTENDING ABOVE THE TOP OF THE NEAREST PARAPET SHALL BE PAINTED WITH ONE OF THE PREDOMINANT COLORS USED IN THE PRIMARY STRUCTURE WALL-MOUNTED UTILITY EQUIPMENT AND METERS SHALL BE SCREENED FROM VIEW FROM A PUBLIC STREET AND SHALL BE PAINTED A COLOR TO BLEND WITH THE BUILDING FAÇADE.



SOUTH EXTERIOR ELEVATION 4

SCALE: 1/16" = 1'-0"

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SITE PLAN

BARBER NICHOLS #2
6290 W 56TH AVENUE
ARVADA, CO 80002

ELEVATIONS

	DATE	REMARKS
1	10/24/2025	1ST DEVELOPMENT APP. SUBMITTAL
2	12/16/2025	2ND DEVELOPMENT APP. SUBMITTAL

JOB NO.:	DEN25-0006-00
PA/PM:	BW
DRAWN BY.:	QDN
DATE:	12/16/2025
PLOT DATE:	12/16/2025

SHEET
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NOT FOR CONSTRUCTION

CITY OF ARVADA

Affidavit Certifying Notice of Neighborhood Meeting Requirements

Project Number: PA2025-0048

Project Name: Barber-Nichols #2

I, Matthew A Johnson, affirm under the penalty of perjury under the laws of the State of Colorado that the requirements of the notice of neighborhood meeting, defined under City of Arvada Land Development Code Division 8-2-4 - Required Notices, have been met for the neighborhood meeting to be held on 6/12/2025 . A copy of the letter and list of recipients is attached and made a part of this affidavit.

Mailed Notice Postmarked Date: 05/22/2025

M. Johnson
Signature

NOTARY CERTIFICATE

STATE OF COLORADO)
) ss
COUNTY OF Jefferson)

The foregoing affidavit was signed and affirmed before me on June 3, 2025
by Jody E. Hain Oliver

Jody E. Hain Oliver
Notary Public

JODY HAIN OLIVER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017335
MY COMMISSION EXPIRES MAY 8, 2027

My Commission expires: May 8, 2027

NOTICE OF NEIGHBORHOOD MEETING

This notice is to inform you of an upcoming opportunity to participate in a neighborhood meeting for a potential development project planned within the City of Arvada.

PROJECT NAME:	Barber-Nichols Plant Annexation
PROPERTY LOCATION:	6290 W 56th Avenue, Arvada, CO 80002
APPLICATION SUMMARY:	Barber-Nichols Inc is proposing to rezone to light industrial and annex the property into the city of Arvada. We intend to build one, approximately 30 ft high, 35,000 sq ft manufacturing facility on the lot to consolidate and improve our manufacturing operations.
MEETING INFORMATION	
DATE:	**Thursday, June 12, 2025**
LOCATION:	**APEX Community Recreation Center – 6842 Wadsworth Blvd. Arvada, CO 80003**
TIME:	**6:00 PM**
PROJECT REPRESENTATIVE	
NAME:	Matt Johnson Barber-Nichols
PHONE NUMBER:	303-421-8111
EMAIL ADDRESS:	mjohnson@barber-nichols.com
ARVADA STAFF CONTACT	
NAME:	Chris Sandine
PHONE NUMBER:	720-898-7463
EMAIL ADDRESS:	csandine@arvada.org

A neighborhood meeting is the first step of the public process in the City of Arvada for developments that require a public hearing. This is done to help ensure community input and feedback into proposed developments prior to any formal application being submitted. If an application is submitted and the project moves forward, property owners and Homeowners Associations located within 1,000-feet of the subject property will be notified of the dates of both the Planning Commission hearing and the City Council hearing approximately 10 days in advance of the hearing dates.

During the neighborhood meeting, the project representative will present the proposal to the audience, and may have a graphical representation of the proposal, a project fact sheet, and/or detailed handouts regarding specific details of the planned development for audience review.

Audience members will be given an opportunity to ask questions and provide comments regarding the proposed project. Arvada city staff will be available at the meeting to address any questions regarding the development review and application process.

Please feel free to contact the project representative or the Arvada staff contact listed above with any questions regarding the meeting.

PROJECT VICINITY MAP

6290 W 56th Avenue



ARVADA INDUSTRIAL LLC
5040 ACOMA ST
DENVER CO 80216

1650 EAST 47TH LLC
7800 W UNION AVE 420
DENVER CO 80237

SC & F HOLDINGS LLC
6155 PIERCE ST
ARVADA CO 80003

ASCENT PROPERTIES GROUP LLC
15764 W 63RD AVE
ARVADA CO 80403

AB 55TH LLC
7800 E UNION AVE SUITE
DENVER CO 80237

QUIPCOM LLC
6040 W 56TH AVE
ARVADA CO 80002

PRIME VENTURES LLC
6325 W 55TH AVE
ARVADA CO 80002

WEST 55TH AVE COMM CONDO
OWNERS ASSN
1908 S UNION PL
LAKEWOOD CO 80228

ELMS LLC
6410 QUAKER CT
ARVADA CO 80007

SUTER PAUL
6390 W 56TH AVE
ARVADA CO 80002

WOLFEPAC VENTURES LLC
7746 W 81ST PL
ARVADA CO 80005

NEFF GERTRUDE M
NEFF CLINTON E
6260 W 56TH AVE
ARVADA CO 80002

RDT ENTERPRISES
6783 REED ST
ARVADA CO 80003

J&G HOLDINGS LLC
5497 HARLAN ST
ARVADA CO 80002

BOILERMAKERZ LLC
8863 W ILIFF LN
LAKEWOOD CO 80227

5520 MARSHALL LLC
5530 MARSHALL LLC
5 MOUNTAIN WILLOW DR
LITTLETON CO 80127

JARAMILLO MIKE
5515 HARLAN ST B
ARVADA CO 80002

PRESCOTT HOLDINGS LLC
12276 W TENNESSEE PL
LAKEWOOD CO 80228

5510 JEDD LLC
5510 MARSHALL ST
ARVADA CO 80002

HUNDLEY PETER B
CHAMP JONATHAN B
HUNDLEY DAVID
5515 HARLAN ST H
ARVADA CO 80002

5611 KENDALL COURT LLC
8863 W ILIFF LN
LAKEWOOD CO 80227

MARGEO INC
13591 W 78TH AVE
ARVADA CO 80005

LOECHER ROGER P
5500 W 44TH AVE
DENVER CO 80212

SSS GROUP LLC
3005 30TH ST
BOULDER CO 80301

F&F ENTERPRISES LLC
6295 W 55TH AVE
ARVADA CO 80002

AGF PROPERTY MANAGEMENT
CORP
1636 LOGAN ST
DENVER CO 80203

DIERSCHOW PAUL E
10520 W 47TH AVE
WHEAT RIDGE CO 80033

DIAMOND 55 PROPERTIES LLC
6070 GRAY ST
ARVADA CO 80003

5636 KENDALL COURT LLC
5455 W 59TH AVE R
ARVADA CO 80003

KENDALL A LLC
5040 ACOMA ST
DENVER CO 80216

TOWER THREE LLC
5601 GRAY ST
ARVADA CO 80002

CENTER DENVER INDUS
ASSOCIATES II LTD
300 S JACKSON ST 440
DENVER CO 80209

EPPS PROPERTIES LLC
5067 OAKWOOD CT
COMMERCE MI 48382

5655 GRAY HOLDINGS LLC
5655 GRAY ST
ARVADA CO 80002

VENDENA ROXY F
5520 HARLAN ST
ARVADA CO 80004

KSB 2018 IRREVOCABLE TRUST
1560 S MONROE ST
DENVER CO 80210

5665 GRAY LLC
5659 ALKIRE ST
ARVADA CO 80002

HART OF LAMPERT LLC
5555 W 51ST ST
DENVER CO 80212

SUDAK PROPERTIES LLC
6859 TAFT CT
ARVADA CO 80004

TOWER THREE LLC
5601 GRAY ST
ARVADA CO 80002

FRONT RANGE INVESTORS XXI LLC
6155 W 54TH AVE
ARVADA CO 80002

ACREE JANET
RALEY TRUST
6750 JOHNSON ST
ARVADA CO 80004

HARLAN STREET BUILDING LLC
7309 CARR ST
ARVADA CO 80005

LAKEHAUS LLC
14078 W 58TH PL
ARVADA CO 80004

ACREE JANET
RALEY TRUST
6750 JOHNSON ST
ARVADA CO 80004

DE BELL CLYDE
DE BELL MARY P
3445 W 25TH AVE
DENVER CO 80211

DUO INDUSTRIAL LLC
2084 S MILWAULKEE ST
DENVER CO 80210

KEATON MICHAEL K
6235 W 56TH AVE
ARVADA CO 80002

ROXY AND DOREEN VENDENA
REVOCABLE TRUST
3415 QUAIL CT
WHEAT RIDGE CO 80033

JAMES D MAY SR EXEMPT BYPASS
TRUST
22918 CHAUS CT
KATY TX 77494

KEATON JORDAN
6235 W 56TH AVE
ARVADA CO 80002

GRAY STREET BUILDING LLC
7309 CARR ST
ARVADA CO 80005

MAY JAMES D SR
PO BOX 1029
BEEVILLE TX 78104

ALPHA INDUSTRIAL LLLP
1475 W 141ST WAY
WESTMINSTER CO 80023

GRAY COURT NORTH LLC
5520 HARLAN ST
ARVADA CO 80002

R & G VENTURES LLC
5474 MARSHALL ST
ARVADA CO 80002

6013 W 56TH AVENUE LLC
440 S LEWIS ST
LAKEWOOD CO 80226

ELEVADO ESTATES LLC
9454 WILSHIRE BLVD PENTHOUS
BEVERLY HILLS CA 90212

HORACE PROPERTIES RLLLP
160 S MARION PKWY
DENVER CO 80209

AGG REAL ESTATE LLC
7033 VANCE ST
ARVADA CO 80003

BERRETH VERNON
BERRETH MARCIA A
14754 JACKSON ST
BRIGHTON CO 80602

ESA REAL ESTATE LLC
7033 VANCE ST
ARVADA CO 80002

Barber Nichols
BARBER-NICHOLS.COM 6325 W. 55TH AVE. ARVADA, CO 80002 (303) 421-8111 FAX. (303) 420-4679

June 12th, 2025

Barber-Nichols Plant Annexation
Neighborhood Meeting Summary

Barber-Nichols (B-N) neighborhood meeting, in reference to Building #2 Plant Annexation (Project # PA2025-0048), was held at 6PM on June 12th, 2025 a the APEC Community Recreation Center. Mike Dixon (General Manager) and Matt Johnson (Director of Operations) were present for the meeting. Barber-Nichols presented our company history, types of products manufactured, and rationale for use of a new building at 6290 W. 56th Avenue. Attached are copies of the presentation and project description handout. Additionally, Barber-Nichols reviewed a preliminary plot layout and use of the land. Barber-Nichols answered questions about our company and the proposed site. Below is a list of questions raised about the proposed site and Barber-Nichols responses to address any concerns.

#	Question:	Response:
1	Are there any chemicals or explosives that will be used that neighbors should be concerned about?	No, Barber-Nichols doesn't not utilize any dangerous chemicals that may be explosive. Examples of chemicals utilized are standard oils, sealants, water-based coolants, acetone, and Isopropyl Alcohol.
2	Will the property be gated in a similar manner to the existing campus?	Yes, the property will have standard fencing around the property and gated access off 56th Ave.

Matt A Johnson

Matt A. Johnson
Director of Operations

Barber Nichols
BARBER-NICHOLS.COM 6325 W. 55TH AVE. ARVADA, CO 80002 (303) 421-8111 FAX. (303) 420-4679

June 12th, 2025

Barber-Nichols Plant Expansion Neighborhood Meeting
(PA2025-0048)

Sign-In Sheet

Name	Address	Business Name
Christy Wolfe	5509 Harlan st Arvada 80002	The Metal Company, Inc
Greg Wolfe	5509 Harlan st "	The Metal Company, Inc.
CHRIS SANDINE	8101 RALSTON ROAD	CITY OF ARVADA
MANNY NUNO	900 S. BROADWAY, DENVER CO 80209	WARE MALCOMB
BRIAN WEISS	900 S. BROADWAY, DENVER	WARE MALCOMB

Barber Nichols
BARBER-NICHOLS.COM 6325 W. 55TH AVE. ARVADA, CO 80002 (303) 421-8111 FAX. (303) 420-4679

June 12th, 2025

Barber-Nichols Plant Expansion Project Description

Barber-Nichols (B-N) is an aerospace/defense contractor located at 6325 W 55th Ave. in Arvada. We design, manufacture, assemble, test, and service specialty pumps, turbines, compressors and their integrated systems. Our business has been growing for over 15 years at a rate of 10%/year or more. As we have grown, we have added jobs, acquired, refurbished and improved adjacent buildings and property, adding them to our campus while generally improving our neighborhood. At this point B-N needs to make a significant move to consolidate our machining operations and improve overall production efficiency. We intend to do this by building a new manufacturing building on property we have recently acquired and consolidate machining operations from three buildings into one.

The acquired property is located at 6290 W. 56th Ave. The overall land dimensions are approximately 162 ft wide (along 56th Ave) and 480 ft deep making up approximately 1.7 acres. The land is in unincorporated Jefferson County and most recently is residential with a significant amount outdoor storage on the property. There is an existing home that will be demolished eventually. This lot is near to our existing facility campus and will be developed to similarly match the existing buildings.

The property is one parcel that will require rezoning. The conceptual layout of the plant is attached. Preliminary discussions with Jefferson County, the City of Arvada Economic Development Association, and architect/civil engineer consultants indicate Arvada will annex the property to enable water use in the sprinklered building. B-N's application for land development will include zoning into Arvada light industrial. Based on our preliminary review of the Arvada Land Development Code, we believe we have a reasonable understanding of both zoning requirements and have developed a concept of our development plan for the property that probably meets the requirements.

The building itself is envisioned to be 75 ft wide, 375 ft deep, and 30 ft high concrete tilt up construction. The office area will be closest to the street and have two stories of office area (approximately 3500 sq ft each level). The main warehouse floor area will have approximately 25,000 sq ft of floor area and have high ceilings with overhead crane access. The rear of the building will have approximately 2250 sq ft of space, some of which may have second story storage associated with it. We envision this rear building space to hold handling equipment, raw material, tooling etc. Besides a main entrance into the office area, we expect to have 3 man door/overhead access door entrances along the perimeter of the manufacturing and storage areas.

The building will house B-N's production planning, purchasing, quality, machining and assembly operations. Machining operations will include conventional turning and milling machines along with high tolerance inspection machines. The machines use water-based coolant. A majority of the warehouse space will be utilized for assembly operations of pump assemblies. The internal environment will be temperature and humidity conditioned with air filtering. We do not expect any pollutant generation or discharge from this building. No highly flammable material is expected to be used or generated in the facility.

The lot will be a mixture of soft and hard surfaced with precipitation runoff draining to and accumulating in the back of the lot where there is an existing storm water line and easement. Irrigation water rights once used on the land have previously been sold to the City of Arvada.

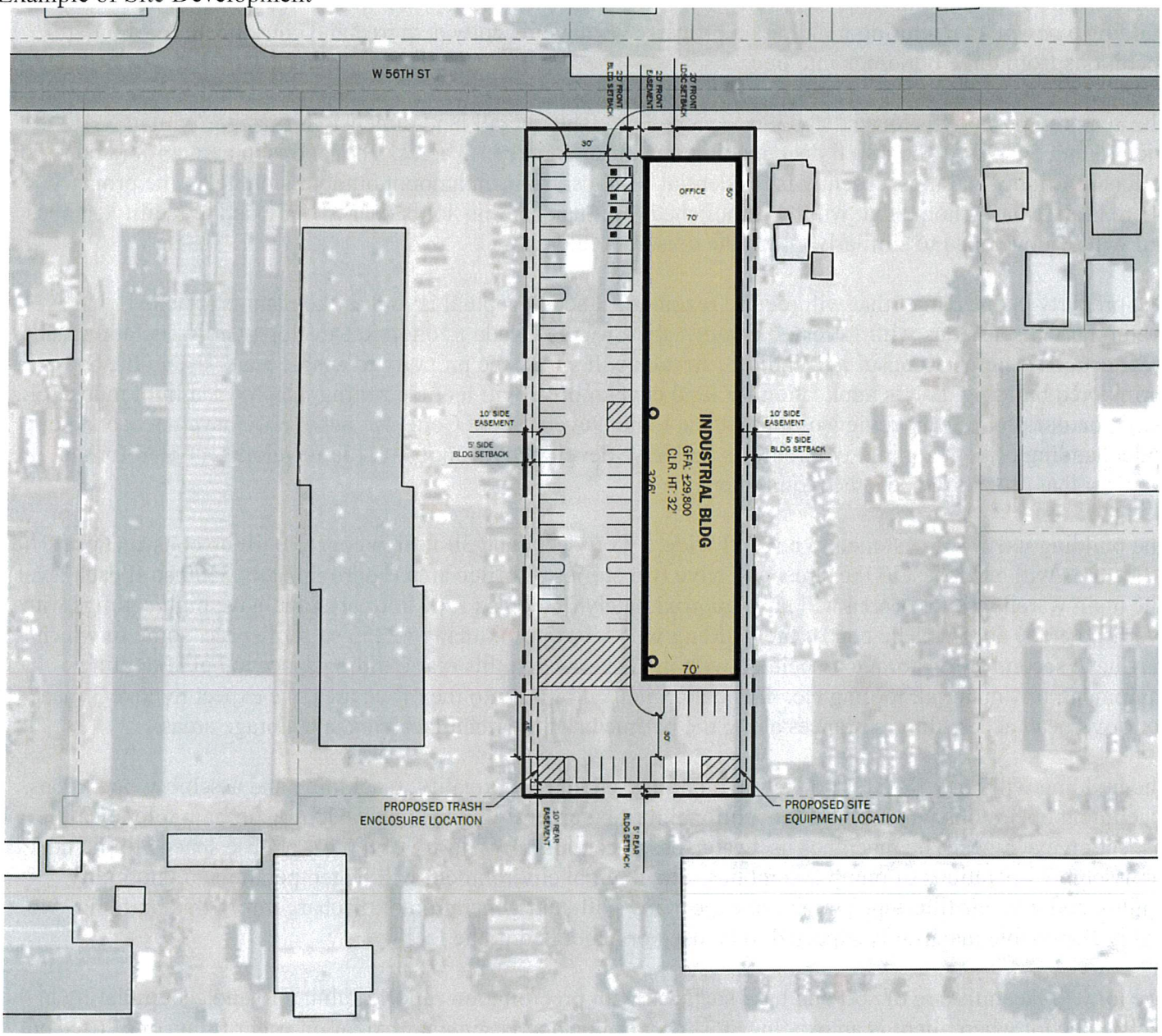
Barber Nichols
BARBER-NICHOLS.COM 6325 W. 55TH AVE. ARVADA, CO 80002 (303) 421-8111 FAX. (303) 420-4679

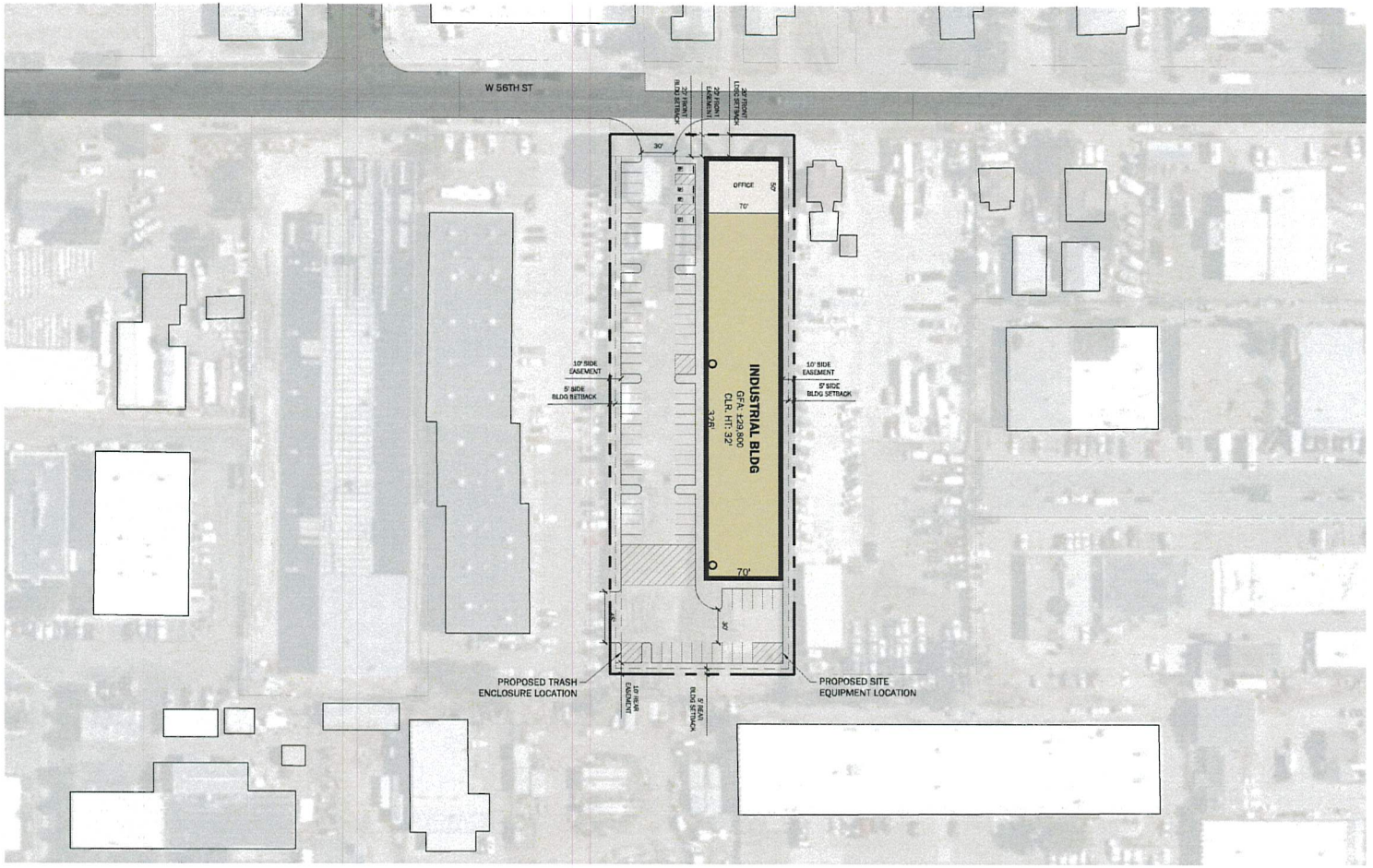
With standard set-backs, there appears to be sufficient parking for the approximately 50-60 people envisioned to work in the building over 2, 10-hour shifts. Truck and fire department access is provided off 56th Ave with turn around access in rear of the building.

Matt A Johnson

Matt A. Johnson
Director of Operations

Example of Site Development





DEVELOPMENT STANDARDS

Zoning		
Jurisdiction		City of Arvada
Zoning Designation		IL
Max Building Coverage		50%
Max F.A.R		N/A
Max Height		40 FT
Max Stories		
Req. Landscape		15%
Building Setbacks		
	Front	20 FT
	Side	5 FT [1]
	Rear	5 FT [1]
Landscape Setbacks		
	Front	20 FT
	Side	N/A
	Rear	N/A
Parking Standards		
	Min Stall Size	9X18
	Drive Aisle	24 FT
	Fire Lane	26 FT
	Landscape Islands	8 FT
Required Parking		
	Office	3/1000 SF
	Manufacturing	1.75/1000 SF
	Warehouse	1.75/1000 SF

PROJECT DATA

Site Summary		*APN(s): ##*
Gross Site Area	78,471 SF	1.80 AC
Total Building Area(s)	Gross Floor Area	29,820 SF
	Footprint	29,820 SF
Coverage	Gross	38%
	Net	38%
FAR	Gross	0.38
	Net	0.38
Provided Landscape	14,028 SF	@ 18%

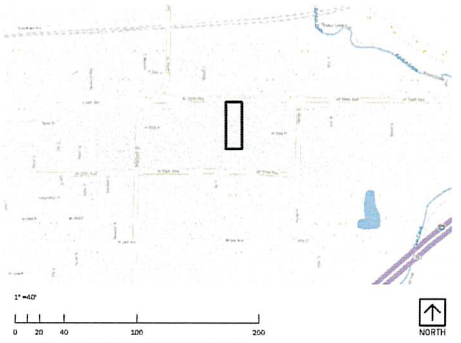
Building 1		
Building Area(s)	Footprint	29,820 SF
Cars Required	@5% Office	61 Stalls
Cars Provided	*@2.58/1,000 SF*	77 Stalls
	Req. Accessible	4 Stalls
Drive-in Doors		2
Docks		0

Notes

1 - Side and rear setbacks shall be 20 ft. where adjacent to a single-family detached use in unincorporated Jefferson County.

2 -

3 -



This conceptual design is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the project might be developed.

Boundary Source: REGRID PARCEL DATA www.regrid.com

Stormwater Management Design: ASSUMED UNDERGROUND SYSTEM

SCHEME: 04

Conceptual Site Plan
BARBER NICHOLS #2
6290 W. 56th Arvada, CO

WARE MALCOMB

DEN25-0006-00
2025.04.09

PAGE
01





Barber-Nichols Plant Expansion #2
DA2025-0057

Barber-Nichols.com

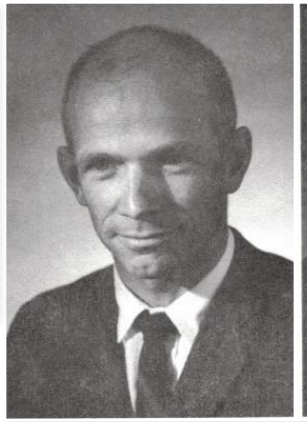
Mission-Critical Turbomachinery Solutions

Barber-Nichols Proprietary and Confidential

About Barber-Nichols

- Founded 1966
- Fiscal Year 2025 Sales: ~$80M
- Employees: 220
- Campus: 100,000 ft^2 total
- 43,000 ft^2 state-of-the-art manufacturing facility - 2021
- Graham Corporation Acquisition- 2021
- P3 Technologies Acquisition- 2023















Purpose & Values

Purpose

Explore the universe, enable sustainable energy, and protect freedom through innovative turbomachinery solutions.

Our Values

- Foster each other's strengths
- Connect passion with purpose
- One team, all in

Industries

- **Aerospace**
  Fuel & Coolant Pumps, Rocket Turbopumps, Cooling Fans, High Altitude Blowers, Fuel Cell Blowers
- **Cryogenics**
  Liquid/Vapor/SC Coolant Circulators, LNG Pumps, Blowers
- **Defense**
  Pumps, Blowers, Turbines, Generators, Electronics
- **Energy**
  Turbine/Generators, Fuel Cell Blowers & Pumps, Research Power Systems ORC & SCO2









Products

- Pumps
- Compressors & Fans
- Turbines & Power Systems
- Rocket Engine Turbopumps
- Motors, Generators & Controllers
- Thermal Management Solutions
- Integrated systems















Products



Air Turbine Pumps for Virginia Class Submarines



Rocket Engine Turbopump for Launcher One



Alternator & Regulator for MK48 Torpedoes

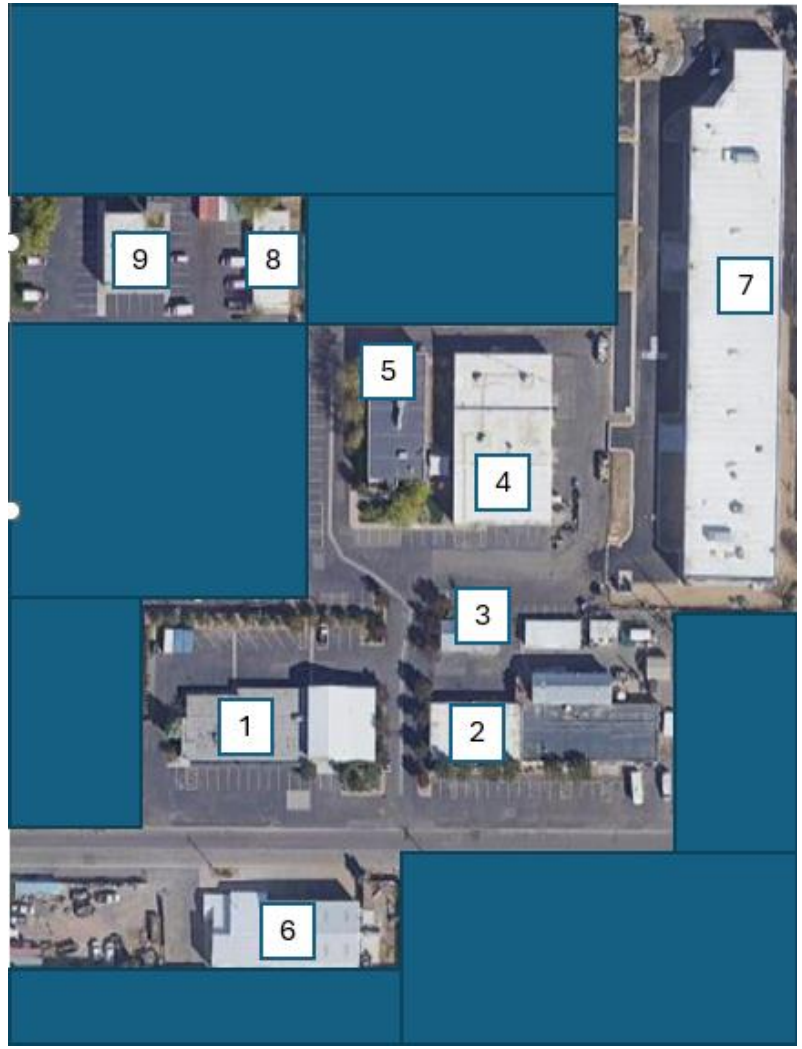


Oxygen Fans for NASA Space Suit

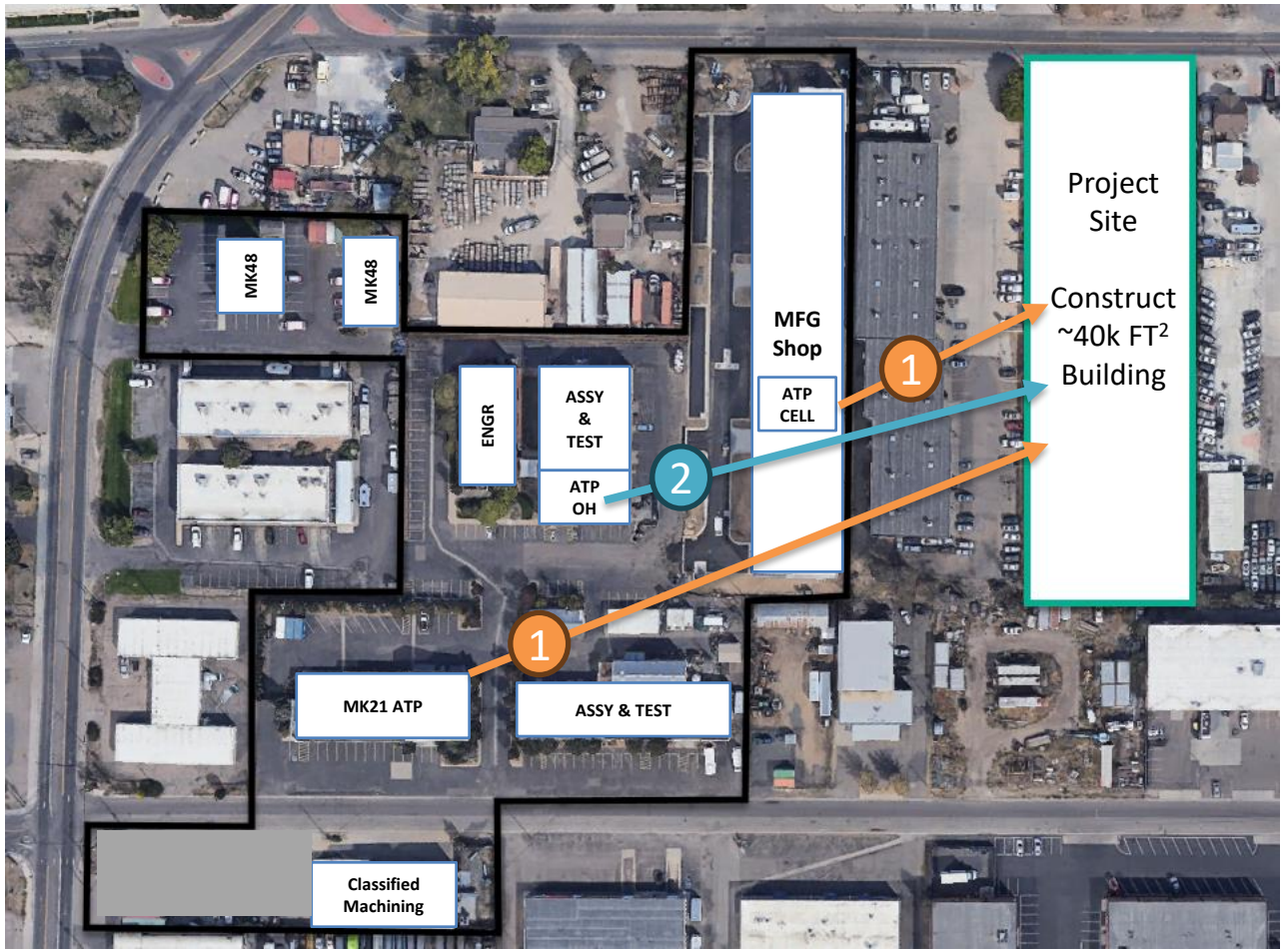
Current Campus

1. Human Resources & Special Programs
2. Assembly & Test, Electronics Lab, ECM & AM
3. High Speed Device Test Building
4. Overhaul & Test
5. Engineering & Sales
6. MK48 & MK21 Production Facility
7. New Manufacturing Facility, Operations, ECM, Shipping/Receiving
8. MK48 Technician Facility
9. Accounting, Inventory, MK48





Proposed New Building @ 6290 W 56th



- Existing campus (black outline)
- New plot of land acquired (green outline)
- Construct a ~40k SQ-FT building
- Move all production of Air Turbines to the new space (Manufacturing cell, inventory, raw materials, Assembly)
- Allows for move & expansion of Overhaul
- Frees up space in MFG shop for additional machine expansions
- Expansion requires annexation, rezone, replat, and site development actions

CITY OF ARVADA

REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM 8.B.1.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency (Presenter: Brian Wilkerson, Emergency Manager)

Report in Brief

PRESENTER: Brian Wilkerson, Emergency Manager

This Intergovernmental Agreement establishes a coordinated framework between the City of Arvada and Apex Park and Recreation District to activate and operate a temporary Disaster Resource Center (DRC) following a declared emergency, advancing the City's policy objective of enhancing community resilience and emergency preparedness. The agreement delineates clear operational responsibilities, with the City leading coordination, staffing, and interagency collaboration, while Apex provides facility access and logistical support, ensuring organized service delivery to impacted residents. It further emphasizes proactive preparedness through required annual training and exercises, reinforcing the City's commitment to readiness and continuous improvement.

The Arvada team recommends that the City Council approve R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency.

Financial Impact

Financially, the cost-sharing and reimbursement structure—aligned with potential FEMA recovery—supports sustainable emergency response capabilities while minimizing long-term fiscal impacts. Under the agreement, Arvada will reimburse Apex for 50% of the documented costs associated with DRC operations. Arvada will then seek reimbursement for eligible expenses through FEMA or other applicable emergency funding sources to offset its share of the costs.

Background

The proposed Intergovernmental Agreement (IGA) between the City of Arvada and Apex is grounded in the City's longstanding policy commitment to emergency preparedness, intergovernmental cooperation, and continuity of essential services, as supported by state law authorizing such agreements and the City's adopted emergency management framework. While the City has historically coordinated with regional partners and agencies to respond to emergencies, recent planning efforts and internal discussions have highlighted the need for a formalized, scalable approach to establishing a DRC to efficiently deliver post-disaster services to residents. This need has been reinforced by the increasing frequency and complexity of emergency events. In response, staff have worked collaboratively with Apex to develop a structured agreement that clarifies roles, responsibilities, and cost-sharing. Council consideration is requested to formalize this partnership, ensure policy alignment with the City's emergency preparedness goals, and position the City to respond effectively and recover efficiently in future emergencies.

Discussion

The proposed IGA represents a policy-driven enhancement to the City's existing emergency management framework by formalizing a structured partnership with Apex for the activation and operation of a DRC. While the City currently maintains general emergency response capabilities, this agreement introduces defined roles, operational protocols, training requirements,

and a cost-sharing structure that do not exist in a formalized manner today. In contrast to existing conditions—where post-disaster service delivery may rely on ad hoc coordination—this IGA establishes a predictable, scalable model that aligns with best practices for interagency collaboration and positions the City to meet residents' needs quickly following an emergency. This approaches follows best practices that have been demonstrated to be successful in other Colorado communities following large-scale disasters. Approval of the staff recommendation will strengthen the City's ability to respond to and recover from emergencies by ensuring rapid deployment of coordinated services, improving communication with the public, and enhancing operational readiness through required training and exercises.

Public Contact

Posting of the City Council agenda. Heard and approved at the Apex Board Meeting on April 9, 2026.

Commission Recommendation

Strategic Alignment

Approving this IGA will further City Council's strategic result of fostering an accessible and inclusive community that preserves and improves quality of life and ensures a safe and thriving place for all community members by helping residents impacted by an emergency find resources to help them recover.

Alternative Courses of Action

Recommendation for Action

The Arvada team recommends that the City Council approve R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency.

Suggested Motion:

I move that R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency, be (approved) (rejected).

Prepared by:
Kylie Justus, Assistant City Attorney

Reviewed by:

Approved by:

Brian Wilkerson, Emergency Manager	04/14/2026
Rachel Morris, City Attorney	04/18/2026
Linda Haley, Deputy City Manager	04/19/2026
Don Wick, City Manager	04/21/2026

SUBJECT: R26-036, A Resolution Authorizing an Intergovernmental Agreement by and between Apex Park and Recreation District and the City of Arvada for the Activation and Operation of a Disaster Resource Center in the Event of an Emergency (Presenter: Brian Wilkerson, Emergency Manager)	**PAGE:** 3 **ITEM:** 8.B.1.

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R 26-036

A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN APEX PARK AND RECREATION DISTRICT AND THE CITY OF ARVADA FOR THE ACTIVATION AND OPERATION OF A DISASTER RESOURCE CENTER IN THE EVENT OF AN EMERGENCY

WHEREAS, Article XIV, Section 18(2) of the Constitution of the State of Colorado encourages and authorizes intergovernmental agreements; and

WHEREAS, C.R.S. §29-1-203 permits local governments to make the most efficient and effective use of their powers and responsibilities by cooperating and contracting with other local governments in order to provide any lawfully authorized function, service, or facility; and

WHEREAS, Apex is a political subdivision of the State of Colorado and a duly organized and existing special district pursuant to Title 32, C.R.S, and Arvada is a Colorado home rule municipal corporation, pursuant to Article XX of the Colorado Constitution; and

WHEREAS, Arvada desires to ensure it is prepared to help the community in the event of an Emergency; and

WHEREAS, Apex is dedicated to serving its community and has facilities available to assist in the event of an Emergency; and

WHEREAS, the purpose of this intergovernmental agreement is to authorize the temporary use of one of Apex's facilities as a Disaster Resource Center ("DRC") following an Emergency. The DRC will provide coordinated disaster assistance services for a limited period of time after an Emergency, which may include: (i) distribution of food, water, clothing, and hygiene supplies; (ii) assistance with replacement of identification documents; (iii) connection with housing and social services; (iv) coordination with state and federal agencies, including Federal Emergency Management Agency; or (v) other disaster-related recovery services.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Intergovernmental Agreement that is in substantially the same form as that attached hereto.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 5th day of May, 2026.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN APEX PARK AND RECREATION DISTRICT AND THE CITY OF ARVADA FOR THE ACTIVATION AND OPERATION OF A DISASTER RESOURCE CENTER IN THE EVENT OF AN EMERGENCY

1.0 PARTIES. The parties to this Intergovernmental Agreement ("IGA") are the Apex Park and Recreation District, a Colorado political subdivision and quasi-municipal corporation organized pursuant to Title 32, C.R.S, 13150 W. 72nd Ave., Arvada, CO 80005 ("Apex"), and the City of Arvada, a Colorado home rule municipal corporation, 8101 Ralston Road, Arvada, CO 80002 ("Arvada"), referred to individually as a "Party" and collectively referred to as "Parties." The Parties agree as follows.

2.0 RECITALS.

2.1 Article XIV, Section 18(2) of the Constitution of the State of Colorado encourages and authorizes intergovernmental agreements.

2.2 C.R.S. § 29-1-203 permits local governments to make the most efficient and effective use of their powers and responsibilities by cooperating and contracting with other local governments in order to provide any lawfully authorized function, service, or facility.

2.3 Apex is a political subdivision of the State of Colorado and a duly organized and existing special district pursuant to Title 32, C.R.S.

2.4 Arvada is a Colorado home rule municipal corporation, pursuant to Article XX of the Colorado Constitution.

2.5 Arvada desires to ensure it is prepared to help the community in the event of an Emergency.

2.6 Apex is dedicated to serving its community and has facilities available to assist in the event of an Emergency.

2.7 The purpose of this IGA is to authorize the temporary use of one of Apex's facilities ("Facility") as a Disaster Resource Center ("DRC") following an Emergency.

2.8 The foregoing recitals are hereby incorporated into and made a part of the Agreement.

3.0 DEFINITIONS.

In addition to the terms that may be defined elsewhere in this IGA, the following definitions will apply:

3.1 *Disaster Resource Center ("DRC")* means a temporary facility that provides coordinated disaster assistance services for a limited period of time after an Emergency, which may include: (i) distribution of food, water, clothing, and hygiene supplies; (ii) assistance with replacement of identification documents; (iii) connection with housing and social services; (iv) coordination with state and federal agencies, including Federal Emergency Management Agency; or (v) other disaster-related recovery services.

3.2 *Emergency* means a natural or human-caused event, including but not limited to fire, flood, earthquake, severe weather, public health incident, or other disaster, that results in substantial community impact, displacement, or need, and that has been declared an emergency or disaster by the City Manager, County Office of Emergency Management Director, Governor of the State of Colorado, or the President of the United States, or any authorized designee of such officials.

4.0 TERM, RENEWAL, AND TERMINATION.

4.1 Effective date. This IGA will become effective and binding upon execution by the last Party to sign it.

4.2 Term. The term of the IGA shall remain in effect for 10 years from the effective date as described in Sec. 5.1, unless otherwise agreed to in writing by the Parties, and subject to availability of funds.

4.3 Termination. A Party may terminate this IGA with or without cause upon 90 days' written notice to the other Party.

5.0 OBLIGATIONS OF THE PARTIES. Following an Emergency, Arvada shall decide whether such Emergency requires the activation of a DRC. If Arvada decides that the activation of a DRC is necessary, Arvada will notify Apex of the need for a DRC. As soon as practicable after receiving notification that Arvada desires to activate a DRC, Apex will determine and inform Arvada if Apex can support and activate the DRC. If Apex agrees it can support and activate the DRC, the Parties agree to the following:

5.1. Arvada's operating obligations. Arvada will be responsible for:

5.1.1 Notifying and coordinating with the Arvada Community Emergency Response Team (CERT), the American Red Cross, and appropriate Arvada staff to operate the DRC.

5.1.2 Notifying and coordinating with participating vendors, governmental agencies, nonprofit organizations, and other service providers to assist with the coordinated disaster assistance at the DRC.

5.1.3 Ensuring the DRC is appropriately staffed, supervised, and managed during all hours of operation.

5.1.4 Providing and maintaining equipment and information technology systems necessary to document personnel time, track individuals served, and collect all other operational data required for reimbursement from the Federal Emergency Management Agency (FEMA) or other applicable state and local agencies.

5.1.5 Providing available furniture and equipment reasonably necessary for DRC operations, including tables, chairs, and other equipment.

5.1.6 Coordinating with local law enforcement agencies for security or other public safety concerns.

5.1.7 Providing timely public communication regarding the DRC location, hours of operation, and other essential information.

5.1.8 Coordinating and communicating with Apex about plans, timelines, facility needs, and any other information reasonably necessary to implement and operate the DRC.

5.1.9 Setting, holding, and facilitating hypothetical, tabletop exercises at least annually to ensure Arvada and Apex are prepared to activate the DRC.

5.1.10 Providing training to the applicable Apex staff and managers for the operation of the DRC.

5.2. Apex's facility provider obligations. Apex will be responsible for:

5.2.1 Providing access to the Facility for the operation of the DRC.

5.2.1.1 The Parties anticipate that the primary/first-choice Facility will be Apex's Community Recreation Center located at 6842 Wadsworth Blvd., Arvada, CO 80003. However, depending on the nature of the Emergency, areas impacted, and operational needs, the Parties agree to confer and mutually determine the appropriate Facility to be used following the Emergency.

5.2.1.2 The Parties agree that use of the Facility for operation of the DRC shall be temporary in nature. This IGA does not create a leasehold or other property interest. Unless otherwise mutually agreed in writing, DRC operations shall not exceed 4 weeks per Activation. The DRC shall operate during reasonable business hours, anticipated to be approximately 10:00 a.m. to 6:00 p.m., and may include weekend hours as reasonably necessary to meet community needs.

5.2.2 Providing Arvada with a Facility floor plan and capacity limits.

5.2.3 Designating an Apex Facility liaison to coordinate with Arvada regarding access to and operation of the Facility, including opening and closing of the Facility, providing access to authorized areas, performing any required repairs in a timely manner, and assisting with the building systems such as restrooms, HVAC, and utilities.

5.2.4 Providing timely notice and communication to Apex patrons and the public regarding the temporary suspension or unavailability of recreation programs and other services resulting from DRC operations.

5.3. Generally. Both Parties will:

5.3.1 Coordinate and communicate throughout the perpetration, activation, duration, and tear down of the DRC.

5.3.2 Work collaboratively between the Parties' communication teams to ensure timely and informative information is reaching the public.

5.3.2 The Parties shall coordinate to prepare and submit the documentation necessary to obtain reimbursement as described in Section 5.1.4. Arvada agrees to reimburse Apex for 50% of Apex's documented and reasonable costs associated with DRC operations, including staff costs, loss of revenue directly attributable to DRC use of the Facility, and supplies utilized in connection with DRC operations. Apex shall submit all invoices and supporting documentation, including time sheets for staff, to Arvada within 30 days following the last day of operation of the DRC.

6.0 NOTICES. Any notice required by this Agreement must be in writing and must be given by certified mail or registered mail, postage and fees prepaid, to the address set forth below, or at such other address as has been previously furnished in writing, to the other Party or Parties. Such notice will be deemed to have been given when deposited in the United States mail.

Arvada: Emergency Manager (Brian Wilkerson or successor)
City of Arvada
8101 Ralston Road
Arvada, Colorado 80002

Apex: Director of Community Services (Katie Groke or successor)
Apex Park and Recreation District
13150 W. 72nd Avenue
Arvada, CO 80005

A Party may designate an employee or volunteer to be responsible for the day-to-day administration of this Agreement. A Party may change the designated day-to-day administrator. Notices that are not required to be sent by U.S. Mail under this Agreement may be sent to the administrator by email.

7.0 GENERAL PROVISIONS.

7.1 Agreement to cooperate only. The Parties are entering into this IGA understanding that it is intended only to facilitate cooperation between the Parties in the provision of the Services set forth herein. No separate entity is created by this Agreement.

7.2 Employees to remain the employee of the Party. An employee or volunteer of any party will remain the employee of that party for all purposes under this Agreement

throughout the term of the initial or any renewal term of this Agreement.

7.3 Governmental immunity.

7.3.1 Each Party shall be responsible for its own negligent or intentional acts or omissions, and for those of its employees and volunteers.

7.3.2 The Parties intend that nothing herein shall be deemed or construed as a waiver by either Party of any immunities, rights, benefits, or protections afforded to them under the Colorado Governmental Immunity Act (Section 24-10-101, C.R.S., *et seq.*).

7.3.3 The Parties agree that in the event any claim or suit is brought against either or both Parties by any third party as a result of the operation of this Agreement, both Parties will cooperate with each other and with the insuring entities of both Parties in defending such claim or suit.

7.3.4 The Parties enter this Agreement as separate, independent government agencies and maintain that status throughout.

7.4 Insurance. Each Party must, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any renewal, extension, or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by that Party under the terms of this Agreement. A Party's failure to secure and maintain sufficient insurance at any time during the pendency of this Agreement do not relieve that Party of its obligations under this Agreement.

7.4.1 Workers' Compensation. The Parties shall at their own respective expense keep in full force and effect during the term of this Agreement statutory workers' compensation insurance suitable to cover each Party's respective employees. At no time shall any Party bear responsibility for accidental injury to the employee of another Party performing services pursuant to this Agreement.

7.5 Additional documents or action. The Parties agree to take any additional action and execute any additional documents that are necessary to carry out this Agreement.

7.6 Assignment. This Agreement may not be assigned by either Party without the prior written consent of the other Party.

7.7 Paragraph captions. The captions of the paragraphs are set forth only for the convenience and reference of the Parties and are not intended in any way to define, limit, or describe the scope or intent of this IGA.

7.8 Integration, amendment, and severability. The Parties may amend this Agreement at any time. Any amendments must be in writing and will be incorporated into and made a part of this Agreement. If any provision of the Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all the remaining provisions of this Agreement shall continue in full force and effect.

7.9 Default. Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered, or performed by a Party, then this Agreement, at the option of the Party who is not in default, may be terminated by the non-defaulting Party, in which case, the non-defaulting Party may recover such damages as may be proper. If the non-defaulting Party elects to treat this Agreement as being in full force and effect, the non-defaulting Party shall have the right to an action for specific performance or damage or both.

7.10 Waiver of breach. A waiver by a Party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either Party.

7.11 Fund availability. Financial obligations of the Parties after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

7.12 Payments to constitute current expenditures. Financial obligations of the Parties, if any, after the current year are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the governing body of either Party. The Parties' obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the Parties within the meaning of Article X, Section 20 of the Colorado Constitution.

7.13 No third-party beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties, and nothing contained in this Agreement shall give or allow any such claim or right of action to any other third party on this Agreement. It is the express intention of the Parties that any person other than the Parties receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

7.14 Entire agreement; Binding effect. This Agreement represents the entire agreement between the Parties and, except for written amendment authorized by the Parties, there are no oral or collateral agreements or understandings. This Agreement

shall inure to the benefit of, and be binding upon, the Parties, their respective legal representative, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.

7.15 Governing law and venue. This Agreement shall be governed by the laws of the State of Colorado. Venue for any action arising under this Agreement or for the enforcement of this Agreement shall be in the appropriate court for Jefferson County, Colorado.

7.16 Counterpart execution. This Agreement may be executed in several counterparts and by facsimile, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument.

DONE this 16th day of April, 2026.

APEX PARK AND RECREATION DISTRICT

Vicki Pyne, Apex President

of the Board of Directors

ATTEST:

Rich Garrimone, Apex Secretary/Treasurer

CITY OF ARVADA, a Colorado home rule municipal Corporation

Lauren Simpson, Arvada Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, Arvada City Attorney

By: _____

CITY OF ARVADA

REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM 8.B.2.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: R26-009, A Resolution Repealing the Current City Council Rules of Procedures Governing Meetings and Adopting City Council Bylaws **(TO BE POSTPONED INDEFINITELY)**

Report in Brief

The current City Council Rules (the "Rules") have been in place for decades; they are outdated and difficult to understand. The City Council has been discussing changes to the current Rules for some time. The City team has therefore proposed replacing the Rules with updated City Council Bylaws (the "Bylaws"). If adopted, the proposed Bylaws will simply replace the current Rules. In other words, the Rules will serve as the City Council's rules of procedure for its meetings. This is noted in sections 1.2 and 1.4 of the proposed Bylaws.

The City Council held a study session on the proposed Bylaws on December 9, 2025, and then considered a resolution repealing the Rules and adopting proposed Bylaws at its February 3, 2026, meeting. As is the case with all City Council meetings, these meetings were noticed to the public. The proposed Bylaws were published before the February meeting in accordance with the law. During that meeting, the City Council considered certain options for various provisions in the proposed Bylaws. At the end of that meeting, the City Council directed team members to make a few revisions to the proposed Bylaws.

The City team is now bringing forward the proposed Bylaws that contain the revisions noted below in the "discussion" portion of this report to City Council.

Financial Impact

N/A

Background

See the Report in Brief and Discussion sections of this report.

Discussion

PRESENTER: Rachel Morris, City Attorney

As noted above, the City team has proposed replacing the Rules with updated City Council Bylaws. Many provisions in the proposed Bylaws are simply a restatement of the current Rules.

At its February 3, 2025, meeting, the City Council directed City team members to make certain revisions to the draft presented at that meeting. Below is a list of the revisions.

<u>The first revisions relate to the two regular public comment periods at every business meeting:</u>

1. Ensure there is no total time limit on the first regular public comment period; however a speaker's individual time is limited to no more than three minutes. See Bylaws Appendix section 6.2. This revision means there is no change from the current Rules.

2. Allow a member of the public to speak on any topic during a regular public comment period (unless the topic is the subject of a public hearing). See Bylaws Appendix section 6.2. This revision means there is no change from the current Rules.

3. Allow both Arvada residents and non-residents to speak at the first regular public comment period, except the presiding officer may give priority to a speaker who is a resident of Arvada during any public comment period. Although this was a topic of Council discussion and a vote at the February 3, 2026, meeting, this did not actually require a revision to the proposed Bylaws. Bylaws Appendix section 6.3.2 already contains this language. This means there is no change from the current Rules.

4. One final note about regular public comment periods: The language in Bylaws Appendix section 6.2.2 of the proposed Bylaws presented to the City Council at the February 3, 2026, meeting contained language about reducing the time allotted to each speaker during the second regular public comment period. This language was drafted in conjunction with the proposed changes to the first regular public comment period discussed at that meeting. It was clear from the discussion at the meeting that the City Council did not want to alter any aspect of either of the City's two regular public comment periods, so the language limiting the time each speaker would be allotted at the second regular public comment period has been removed. Each speaker at the second regular public comment period will be allowed to speak for five minutes. See Bylaws Appendix section 6.2.2. This revision means there is no change from the current Rules of Procedure.

<u>The next two revisions relate to public comment within a public hearing:</u>

5. Remove the one-hour per side presentation limit to public comment within a public hearing, remove the language that each side will be given extra time, and specify that an applicant or their representative will be given extra time for rebuttal. See Bylaws Appendix 7.5.2. Each side is currently limited to one hour, so this revision represents a change from the current Rules. Additionally, the last sentence of Bylaws Appendix 7.6 was removed since the total time limitation was removed.

6. Allow City Council members to question an applicant or representative thereof, a person who speaks during the public comment portion of a public hearing, and a member of the City team during the discussion portion of a public hearing. The current Rule on questioning is somewhat vague (see Rule 2F); this revision helps clarify this process. See Bylaws Appendix sections 7.5.6 and 7.5.7. This revision represents a change from the current Rules.

<u>The next two revisions relate to the conduct of meetings generally</u>:

7. Eliminate the 11:30 p.m. meeting end time. The 11:30 end time is set forth in current Rule 2B; this Rule has been in place for many years. We eliminated the 11:30 meeting time by deleting sections 2.11.1, 2.11.1.1, and 2.11.1.2 – these were the sections that explained how to adjourn a late meeting. The only guidance left in the Bylaws about adjourning a meeting is in section 2.11. See Bylaws section 2.11. This revision represents a change from the current Rules.

8. The proposed Bylaws adopt *Bob's Rules of Order for Colorado Local Governments: Simplified Parliamentary Rules for Public Meetings*. Bob's Rules of Order make City meeting processes more accessible to everyone. The City Council directed that existing text in Bob's Rule 6.1 about a "Friendly Amendment" be deleted and that it be revised to clarify the amendment process. Rule 6.1 of Bob's Rules will now state that if a Council member moves to amend a motion, the presiding officer will call for a vote on the amendment, and members will vote on the amendment. After that, the Council will vote on the underlying motion (as it may or may not be amended). See Bylaws section 1.6.3. The Bylaws also now allow the Council member making the friendly amendment to withdraw the amendment at any time before the presiding officer calls for a vote on the amendment. See Bylaws section 1.6.4. The current Rule on this process is unclear (see Rule 4.J), so this represents a change from the current Rules.

<u>The final revisions listed below relate to other changes made to sections of the Bylaws since the February 3 meeting:</u>

9. Added language to clarify that a Council member's declared conflict of interest must be legal in nature and confirmed by the City Attorney. See Bylaws section 7.2.2.

10. Remove language to allow the presiding officer to move individual matters within the agenda. This change is consistent

with Bob's Rules of Order. The current Rule only allows the presiding officer to move individual matters on an agenda within specific categories, so this represents a change from the current Rules.

11. Clarifies that the city manager, after consultation with the mayor, may elect to postpone a scheduled meeting or hold the meeting remotely if a technical issue, civil emergency, emergency, disaster, city-wide health concern, adverse weather conditions, or other circumstances make it imprudent or impossible for a quorum of the City Council to meet. See Bylaws section 4.4.1 and Bylaws Appendix section 2.7. Under the current Rules, a regularly scheduled meeting can only be moved to a different location in the event of a declared disaster, emergency, or civil emergency. This change expands the circumstances upon which the location of the meeting may be changed and clarifies that the meeting may be held remotely. The change also describes how such decision is made. This is a minor change to the current Rules.

12. Allow special meetings to occur on any day of the week. See Bylaws Appendix Table 1. The current Rules state that special meetings may be held on a day other than Monday, so this represents a change from the current Rules.

13. Clarifying that the city team does not need to include a redline and strikethrough document with an amendment that is a repeal and reenactment of an existing ordinance when doing so would not enhance the understanding of the changes made to the original ordinance. See Bylaws Appendix section 5.2. This becomes relevant when an ordinance, or a significant portion thereof, is completely amended such that little to none of the original language will remain in the amended version. The current Rules do not address this situation, so this is a change to the current Rules.

14. Exempt city staff from the requirement that visual materials be submitted to the city clerk no later than Thursday at noon the week before a meeting. This change allows the city staff flexibility to produce high-quality materials. See Bylaws Appendix section 8.3.4. The current Rules apply this limitation to city staff, so this is a change to the current Rules.

15. Update grammar and minor typographical errors.

Public Contact

A study session on this topic was held on December 9, 2025. This item was also heard before the City Council at its February 3, 2026, meeting. Posting of the City Council Agenda.

Commission Recommendation

N/A

Strategic Alignment

Arvada depends on a well-managed, fiscally responsible, and transparent City government. Adopting the proposed Bylaws aligns with OSE 1: Provides leadership, policy and guidance, communication, and engagement services to City Council, the community, and the organization by utilizing a values-driven culture, ethical behavior, and transparency to maintain trust.

Alternative Courses of Action

The Council could opt to leave the current Rules of Procedures in place.

Recommendation for Action

The Arvada team recommends that the City Council approve a motion to postpone this item indefinitely.

Suggested Motion:

I move that R26-009, a Resolution Repealing the Current City Council Rules of Procedures Governing Meetings and Adopting City Council Bylaws, be postponed indefinitely (approved) (rejected).

Prepared by:
Toni Riebschlager, Law Office Administrator

Reviewed by:

Approved by:

Nora Steenson, Deputy City Attorney	04/13/2026
Rachel Morris, City Attorney	04/20/2026
Laura Hemler, Assistant City Attorney	04/20/2026
Allison Scheck, Deputy City Manager	04/22/2026
Linda Haley, Deputy City Manager	04/22/2026
Don Wick, City Manager	04/24/2026

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R26-009

A RESOLUTION REPEALING THE CURRENT CITY COUNCIL RULES OF PROCEDURES GOVERNING MEETINGS AND ADOPTING CITY COUNCIL BYLAWS

WHEREAS, the City Council has had in place for many years Rules of Procedures Governing Meetings; and

WHEREAS, the City Council finds that organizations should review existing policies, procedures, and rules on a regular basis to ensure they conform to current and best practices; and

WHEREAS, the Rules of Procedures Governing Meetings have not been reviewed in their entirety for a considerable period of time; and

WHEREAS, the City Council recently undertook a review of the Rules of Procedure Governing Meetings, which revealed that the Rules should be repealed and that the Council should adopt City Council Bylaws instead; and

WHEREAS, adopting the City Council Bylaws will enhance the City's ability to conduct its business more efficiently, fairly, and transparently.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The City Council hereby repeals the current City Council Rules of Procedure and all amendments thereto and adopts the City Council Bylaws in substantially the same form as those attached hereto.

Section 2. The City Council Policy Manual remains unchanged.

Section 3. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 5th day of May, 2026.

_____
Lauren Simpson, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

CITY OF ARVADA
CITY COUNCIL BYLAWS

History:

Adopted (Effective April 21, 2026) (R26-009)

City Council Rules of Procedures Governing Meetings:
(Repealed April 21, 2026) (R26-009)
Amended May 18, 2020 (effective May 18, 2020) (R20-041)
Amended December 3, 2018 (effective January 1, 2019) (R18-133)
Amended February 6, 2012 (R12-015)
Amended June 6, 2011 (R11-074)
Amended July 2, 2007 (R07-076)
Amended November 4, 2002 (R02-179)
August 2, 1999 (R99-147)
Effective June 5, 1995 (R95-130)
(For earlier history, see the city clerk's office)

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1. BYLAWS GENERALLY

1.1 Short title. These Bylaws will be known as the Council Bylaws or the Bylaws. They consist of these Bylaws and several appendices. Information set forth in the appendices carry the same authority as information set forth in the Bylaws.

1.2 Purpose. These Bylaws are intended to facilitate the Council's ability to conduct the City's business fairly and transparently. These Bylaws are to be used in conjunction with Bob's Rules of Order noted below. Together, these documents establish rules of procedure for meetings and promote fair and consistent meeting practices. They help define roles and responsibilities for members of Council and for City team members. They provide the structure to accomplish City business in an organized and transparent manner and provide the flexibility needed to ensure that City business is completed efficiently.

1.3 Authority. These Bylaws are established and adopted in accordance with Charter section 5.1.

> 1.3.1 *Review of; Amendment to.* These Bylaws will be reviewed no less often than once every five years. The Council may at any time and by resolution amend, restate, or rescind these Bylaws or any portion thereof. The resolution must be approved by the city attorney as to form and placed on a Council meeting agenda under "New Business."

1.4 History. These Bylaws were previously known as the City Council Rules of Procedures. The Council wishes to repeal the Rules and adopt the City Council Bylaws. These bylaws will be the rules of procedure governing meetings as required by Charter section 5.1. These Bylaws supersede all Rules of Procedures previously adopted by the City Council.

1.5 Definitions. The following words, terms, and phrases, when used in these Bylaws will have the meaning ascribed to them in this section except where the context clearly indicates a different meaning.

> *Charter* means the Arvada City Charter.
>
> *Chief of police* means the chief of the Arvada Police Department or designee thereof.
>
> *City attorney* means the Arvada city attorney or designee thereof.
>
> *City clerk* or *clerk* means the clerk of the City of Arvada or designee thereof.
>
> *City Council or Council* means the collective Arvada City Council including the Mayor and Mayor pro tem.
>
> *City manager* or *manager* means the city manager of the City of Arvada or designee thereof.
>
> *City team* or *City team member* means an employee or employees of the City of Arvada including but not limited to the city manager, city attorney, city clerk, and the chief of police. For the purposes of these Bylaws, City team or City team member does not include a member of the City Council.

Council member or *member* means a person elected or appointed to the Arvada City Council and currently serving on the Council including the mayor and mayor pro tem.

Election means an election in which vacancies are filled on the Council.

Emergency means and includes a civil emergency, a disaster, or an emergency as those terms are defined in section 26-33 of the Arvada City Code.

Colorado Open Meetings Law or the *OML* means the laws set forth at C.R.S. §24-6-401 *et seq.* as may be from time to time amended that set forth rules related to holding public meetings.

Holiday has the same meaning as that set forth in the personnel chapter of the City Code.

Speaker means a person authorized through these Bylaws to address the Council during a public comment or a public hearing.

Writing or *written* means a communication made via hard (paper) copy or by electronic mail message.

1.6 Parliamentary authority (rules of procedure). Except as is otherwise set forth in the City Code or these Bylaws, *Bob's Rules of Order for Colorado Local Governments: Simplified Parliamentary Rules for Public Meetings* (2023), as may be from time to time amended, will be the parliamentary authority for all Council meetings. These rules of procedure will be known as Bob's Rules. They will govern the conduct of Council meetings. Bob's Rules are adopted as if they are set forth in full herein, with the following deletions and amendments:

1.6.1 *Deletion.* Rule 5.3, which states that a motion requires a second, is hereby deleted from Bob's Rules as adopted by the Council. No motion requires a second.

1.6.2 *Deletion.* Rule 5.4, which requires the presiding officer to acknowledge that a motion is properly stated and seconded, is hereby deleted from Bob's Rules as adopted by the Council. The presiding officer is not required to acknowledge that a motion is properly stated and seconded.

1.6.3 *Amendment.* Rule 6.1 of Bob's Rules is hereby amended in its entirety to read as follows: "Rule 6.1 Notwithstanding any other provision of Bob's Rules, if a Council member moves to amend a motion, the presiding officer will call for a vote on the amendment and members will vote on the amendment. The presiding officer will then call for a vote on the underlying motion, as it may or may not be amended, and Council members will vote on the motion."

1.6.4. *Amendment.* Rule 6.2 of Bob's Rules is hereby amended in its entirety to read as follows: "Rule 6.2 A Friendly Withdrawal is authorized only for a debatable motion. Notwithstanding any other provision of Bob's Rules, if a Council member moves to make or amend a motion, that Council member may withdraw the motion or amendment, including a friendly amendment, at any time prior to the presiding officer calling for a vote on that motion or amendment."

1.7 City Council Policy Manual – adoption of. The Council has adopted and may continue to adopt City Council policies to provide guidance and clarity about Council matters not addressed in these Bylaws. With the Bylaws, the City Council Policy Manual is intended to provide a decision-making framework, outline expectations for Council members, encourage accountability, help mitigate the risks inherent in operating a large municipal corporation, and promote a positive working environment.

1.7.1 *Review of; Amendment to.* Each Council policy will be reviewed no less often than once every five years. The first review of a Council policy in effect at the time of the adoption of these Bylaws may occur at the same time as the first review of the Bylaws. The Council may, by resolution, adopt, amend, restate, or rescind Council policies or any portion thereof. The resolution must be approved by the city attorney as to form and placed on a Council meeting agenda under "New Business."

1.8 Conflicts. To the extent there is a conflict between any portion of these Bylaws, Council policies, the Charter, the Arvada City Code, or Bob's Rules, then Charter provisions, City Code provision, these Bylaws, Council policies, and then Bob's Rules will prevail, in that order.

1.9 Guidance. Understanding the Charter, the Code, these Bylaws, Council policies, and Bob's Rules cannot anticipate every situation that the Council might encounter in planning for or holding meetings or engaging in other business, these Bylaws and Council policies are to be used to assist Council members and City team members make informed decisions in those situations. A course of action on a matter not addressed in these Bylaws or a policy should be one that reflects City values and that enhances the fairness, transparency, and efficiency of City and Council operations.

2. MEETINGS GENERALLY

2.1 Types and schedule of meetings. The Council will hold regular business meetings and may hold workshop meetings, study session meetings, special meetings, and emergency meetings for the purposes outlined in and generally on the days and times set forth in **Appendix 1.**

2.2 Location. All regular business meetings will be held in Council Chambers located in City Hall. Study sessions and informal meeting sessions held before regular business and workshop meetings may be held in the Council Conference Room, also located in City Hall. Meetings may also be held in a completely remote format. The location of a Council meeting may be changed at the sole discretion of the city manager if the meeting and the change in location is properly noticed.

2.2.1 *Electronic participation.* Electronic participation in Council meetings may occur as set forth in **Appendix 2.**

2.3 Notice. All Council meetings must be noticed by the clerk in accordance with the OML. Each meeting notice must be issued at least 24 hours before the meeting, and each notice must include the date, time, and location of the meeting, and specific agenda information where possible. Each meeting notice must be posted on the City's website and may be posted on the City's social media accounts, on KATV8, and otherwise as designated by Council by resolution. Notice of a special meeting or emergency meeting will be provided to members as set forth in

Charter section 5.2. The clerk will notice an emergency meeting by any means reasonably calculated to provide notice to as many members of the public as possible. The clerk will notice the public when remote viewing of or participation in a meeting is available. The clerk will notice a meeting location change as soon as is practicable after the change occurs by means that are appropriate to the circumstances.

2.3.1 *Notice of postponement or cancellation.* The clerk will notice the public of the postponement or cancellation of a meeting as soon as is reasonably possible following the postponement or cancellation by means that are appropriate to the circumstances.

2.4 Presiding officer. In accordance with Charter section 4.5, the mayor will preside over each meeting. The mayor pro tem will serve as the presiding officer when the mayor is unavailable. If the mayor is participating in a meeting by electronic means, and the mayor pro tem is participating in person, the mayor pro tem (or other designated member who is physically present) will preside over the meeting. If both the mayor and mayor pro tem are unavailable, the city clerk will call the meeting to order and call roll. If a quorum is present, a majority of members present will then elect by majority vote a temporary presiding officer who will serve as the presiding officer for that meeting.

2.4.1 *Duties.* The presiding officer will manage the agenda, preserve decorum to help ensure that meetings progress in an orderly and productive manner, and with the assistance of the city attorney as needed, render decisions on questions of procedure in accordance with Charter section 4.5.

2.5 Duties of members. Members' duties and privileges are set forth in **Appendix 3**.

2.6 Quorum. A majority of all members (four members) will constitute a quorum for the transaction of business at all meetings including an emergency meeting. A quorum must be present to conduct any business at a meeting, except that in the absence of a quorum, a lesser number may postpone all unresolved items to the next regular business or other meeting as appropriate and adjourn the meeting to a later time or date. In the absence of all members, the clerk may adjourn any meeting for not longer than one week. See Charter section 5.4.

2.6.1 *In-person attendance not required to establish quorum.* A member will be considered present at a meeting for the purpose of establishing a quorum and for voting if that member is present by video conferencing, telephone, or other similar means of communication.

Exception: A member who attends a meeting remotely will not be considered present for the purpose of establishing a quorum in a quasi-judicial public hearing.

2.7 Voting. Only members of the Council may vote. A formal vote of "yes" or "no" is required for the passage of an ordinance, resolution, motion, to excuse a member from a meeting, to excuse a member from a formal vote on a particular matter under section 2.7.3.1 below, to suspend a Bylaw under section 2.9 below, and for the election of the mayor pro tem. Voting may be by electronic device, voice vote of "yes" or "no" taken by roll call, or a combination of the two. All formal votes will be entered into the record.

2.7.1 *Affirmative vote required.* All ordinances on first reading, resolutions, and motions before the Council will pass upon the affirmative vote of a majority of the members present, except as otherwise required by law or by these Bylaws, and except that an ordinance requires the affirmative vote of four members of the Council for final passage. An emergency ordinance may be approved as set forth in Charter section 5.9. In case of a tie vote on a motion, the motion will be considered lost. See Charter section 5.6. All other matters before Council including but not limited to the approval of the minutes may proceed with a consensus of Council; these matters do not require a "yes" or "no" vote, but rather the general assent of a majority of those members present at the meeting.

2.7.2 *Duty to vote.* A member who is present at a meeting must vote on each matter before the Council for a formal vote at that meeting unless excused by the majority vote of the remaining members, or because of a declared legal conflict of interest confirmed by the city attorney. A member who abstains from a formal vote or refuses to vote, except when excused due to a conflict of interest or when otherwise permitted to abstain under applicable law, may be subject to sanctions outlined in Arvada City Code section 2-381. See also Charter section 5.6.

2.7.3 *Conflicts of interest.* No member may vote on a matter in which they have a financial interest other than the common public interest, or on a question involving their own conduct. See Charter section 5.6 and City Code section 2-376.

2.7.3.1 Conflict of interest procedure. A request to be excused from a formal vote on a matter due to a conflict of interest should be made when the matter is called and must be made before the presiding officer calls for the vote. After the member has briefly stated the reason for their request, any member may make a motion on the request. No debate is allowed on the motion. All members present, except the one who made the request, must vote on the motion. If excused, the excused member must leave the chamber. That member will be recalled to the chamber once the vote on the matter is taken.

2.7.4 *Consent agenda voting.* The members present will vote on all consent agenda items as a group through one motion.

2.7.4.1 Removal of an item from the consent agenda. If a member wishes to remove an item from the consent agenda, they are encouraged to notify the clerk before the meeting. The members present at the meeting will act on the removed item as a separate matter after voting on the remaining consent agenda items. No motion is needed to remove an item from the consent agenda, but any item removed from the consent agenda requires a motion and the majority vote of members present for passage.

2.8 Executive sessions. An executive session is a portion of a meeting closed to the public that is devoted to a *confidential* discussion of a particular topic as authorized by the OML. An

executive session must comply with the applicable provisions of the OML. Executive sessions will be held in accordance with **Appendix 4**.

2.9 Suspension of the Bylaws. The Council may, by motion, temporarily suspend any provision of these Bylaws not governed by the Charter or the Code. As an example, a provision of the Bylaws may be suspended by the Council for the benefit of a meeting participant in accordance with the Americans with Disabilities Act or to address another unusual circumstance. A motion to suspend must specify which Bylaw or part thereof is to be suspended and the purpose of the suspension. A suspension of a Bylaw will remain in effect throughout the meeting at which the Bylaw was suspended.

2.10 Ordinances and resolutions. Ordinances and resolutions will be processed according to the procedures set forth in **Appendix 5**.

2.11 Adjournment. Except as noted in section 2.6 above, each Council meeting will be adjourned upon a declaration of adjournment by the presiding officer or a motion to adjourn followed by a majority vote to adjourn. If a scheduled item is interrupted by the adjournment, that and subsequent agenda items will be continued to the next regularly scheduled business meeting or other future meeting as determined by the manager.

3. OPEN MEETINGS; PUBLIC PARTICIPATION

3.1 Open meetings. All meetings of members of the Council must comply with the Colorado OML. The OML defines a "meeting" as "any kind of gathering convened to discuss public business in person, by telephone, electronically, or by other means of communication." Any time three or more Council members discuss public business, the discussion will be considered a meeting requiring notice to the public; this is true whether the Council members are in the same room, talking by telephone, or communicating via email or other electronic method.

> 3.1.1 *Meetings open to the public.* All meetings of the Council, including hybrid and remote meetings, are open to the public except that an executive session may be closed as allowed by law. Each meeting, including an informal Council session held before a regular business or workshop meeting, will be livestreamed or otherwise made available to the public in real time as circumstances, available technology, and City team resources allow.

3.2 Decorum. The City of Arvada values respectful public discourse and takes reasonable steps to ensure that the public's business at City Council meetings is transacted in a transparent, safe, and efficient manner. No person may engage in an activity that interferes with another person's ability to hear or observe a Council meeting, that disrupts the orderly transaction of the public's business, or that otherwise interrupts the operations of the Council at a meeting. Each speaker must adhere to the time limitations set by these Bylaws or by the presiding officer as appropriate.

> 3.2.1 *Admission to the dais.* No one except the Council, City team members named in these Bylaws, and individuals invited by the presiding officer may be admitted to the Council dais during a meeting.

3.2.2 *Interference or disruptive conduct.* The presiding officer may direct anyone who interferes with or disrupts the orderly transaction of the public's business or otherwise engages in prohibited conduct or in disorderly conduct that delays or interrupts the operations of the Council at a meeting to cease the violative conduct or to leave the meeting. Any person who fails to immediately comply with the directive may be subject to removal from the meeting, and, where a police officer believes there is probable cause to believe that a statute or ordinance has been violated, may be subject to criminal charges.

3.2.3 *Posting of notice.* The clerk will post a sign about prohibited conduct outside the chamber. Understanding that the City cannot anticipate all conduct that might disrupt the orderly transaction of business at Council meetings, the notice may be general in nature.

3.3 Communication with the Council at meetings. The City encourages the public to communicate with Council members via public comment at a Council meeting in accordance with **Appendix 6**, or during a public hearing on a matter in accordance with **Appendix 7**.

4. AGENDAS; MEETING LOGISTICS

4.1 Agendas.

4.1.1 *Preparation and distribution of.* Each agenda will be prepared by the clerk at the direction of the manager and distributed as set forth in **Appendix 8**.

4.1.2 *Order of business at meetings.* The Council will conduct business at meetings in accordance with **Appendix 9**.

4.1.2.1 Adding or deleting an agenda item during a meeting. A consensus of the Council may direct the manager to add or delete an agenda item during a meeting if the change is consistent with the provisions of the Open Meetings Law.

4.1.2.2 Change to agenda order. Notwithstanding any other provision of these Bylaws, the presiding officer may call individual matters within an agenda in any order. In addition, the Council, by a majority vote of the members present at a meeting, may change the order of business from that stated in an agenda except that the Council may not conduct a public hearing prior to the time set on the agenda for that hearing.

4.1.3 *Presentation of an agenda item.* Upon calling an agenda item, the presiding officer will ask a City team member for information about the item.

4.2 Recording. Except as otherwise noted herein, and except for an executive session where legal advice is given to the Council, each Council meeting will be recorded electronically. In the event circumstances prevent the electronic recording of an emergency meeting or otherwise make the electronic recording of an emergency meeting impractical, the clerk will draft minutes of the meeting in accordance with section 4.3 below.

4.3 Minutes. The clerk will draft written minutes of each regular business, special, and emergency meeting. The minutes must include each motion and the results of any formal electronic or roll call vote by each member. Minutes of each meeting will be open to the public for inspection. In the case of an emergency meeting, and if the clerk is unavailable, any City team member may record the minutes.

4.3.1 *Presentation of the minutes.* The minutes of each meeting will be delivered to each member as part of the agenda packet for the next regular Council meeting or as soon thereafter as is reasonably practicable.

4.3.2 *Reading is not required.* Minutes will not be read if each member has been given a copy of the minutes in advance of the meeting at which they are to be approved.

4.3.3 *Procedure for approval.* The presiding officer will ask at the beginning of a regular or special meeting if there are any corrections to the minutes for the previous meeting or meetings as published. If no correction is noted, or if a correction is noted and no other member objects to the correction, the minutes will be deemed approved as presented. If there is an objection to a noted correction, City team members may assist in resolving the issue. Following any necessary discussion, the minutes will be approved with or without the noted correction as appropriate and with the general assent of a majority of those members present at the meeting. The minutes will be signed by the presiding officer and the clerk of the meeting for which minutes are approved.

4.4 Postponement or cancellation. If a scheduled meeting falls upon a holiday, the meeting will be automatically canceled without the need for a Council vote. The Council may, by the majority vote of those present, cancel any meeting, except that at least one regular business meeting must be held each month. A regular business meeting postponed and rescheduled to a day other than the first or third Tuesday of the month will be considered a regular business meeting and not a special meeting.

4.4.1 *Extraordinary events.* In the event a technical issue, civil emergency, emergency, disaster, city-wide health concern, adverse weather conditions, or other circumstances make it imprudent or impossible for Council to meet for a scheduled meeting, the meeting may, by order of the city manager after consultation with the mayor, be postponed until a quorum of the Council is able to meet or be held as a remote meeting in accordance with BA 2.7

4.5 Roles of City team members. The city manager, city attorney, city clerk, and chief of police or designees thereof are expected to attend each Council meeting and perform duties as set forth in **Appendix 8**. City department and work system directors or other team members may attend Council meetings as deemed necessary or practical by the city manager or the city attorney; they may delegate their meeting responsibilities as appropriate.

Bylaws Appendix 1 - City Council Meetings: Types and Schedule

Type / Purpose of the meeting is to allow the Council to:	Day / Time	References and Notes
Regular business: Take formal action on matters by ordinance, resolution, or motion.	On the 1st and 3rd Tuesday of each month at 6 p.m. local time (including a meeting held on the 5th Tuesday or held on another day in place of a Tuesday meeting cancelled due to a holiday).	See Charter section 5.1. Council must meet no less often than once per month. Public comment is allowed. BA 6.1.1.
Workshop:* Receive information about an issue or topic affecting the City and provide a forum for members to discuss those issues and topics.	On the 2nd and 4th Tuesday of each month at 6:00 p.m. local time.	May be held during a regular business or special meeting if the meeting agenda clearly delineates which portion of the meeting is a workshop. Public comment is allowed in the sole discretion of the presiding officer. BA 6.1.1.
Study session:* Understand policy options related to a particular topic and to ascertain Council's policy direction on that topic.	On Tuesdays at 4:00 p.m. local time but may be held any day of the week as directed by Council.	May be held during a regular business or special meeting if the meeting agenda clearly delineates which portion of the meeting is a study session. Public comment is not allowed. BA 6.1.1.
Special: Transact limited municipal business which cannot otherwise be transacted in a timely manner at a regular meeting.	Held at a time specified in the special meeting notice. Will be called by the clerk upon receipt of a written request by the mayor, or of any two other members of Council on at least 24 hours written notice. May be held on shorter notice if all members are present or have waived notice in writing.	See Charter sections 5.2 and 5.3. No business may be transacted at a special meeting unless it has been stated in the meeting notice, except business that has already been noticed at a regular meeting may be transacted at a special meeting even if that business is not noticed in the call for the special meeting, if all members present at the meeting consent thereto and all absent members file their written consent. Public comment is allowed on any business item on the agenda. BA 6.2.4.
Emergency: Conduct business that would otherwise occur at a regular business meeting when it would be imprudent to wait for the next such regularly scheduled meeting to occur, or to allow Council to examine a topic related to the declared emergency.	May be held on any day of the week, at any time, and at any location during a civil emergency, emergency, or disaster declared under Chapter 26 of the City Code.	See Charter section 5.9 and A.C.C. Chapter 26. Public comment is allowed in the sole discretion of the presiding officer. BA 6.1.1.
Informal:* Review upcoming agendas and calendars and provide and receive similar logistical or operational information.	On Tuesdays at 5:00 p.m. local time before a regular business or workshop meeting.	Public comment is not allowed. BA 6.1.1.

BA TABLE 1

*No formal vote, decision, or action on a topic may be taken at a workshop, a study session, or an informal meeting.

Bylaws Appendix 2 - Electronic Meetings

BA 2.1 All meetings open. All Council meetings will be open to the public in accordance with section 3.1 of these Bylaws.

BA 2.2 In-person meetings. Council meetings will be primarily conducted in person.

BA 2.3 Electronic meetings generally. A meeting at which some Council members are physically present, but which allows for the electronic participation of other members will be known as a "hybrid" meeting. A meeting at which all members appear telephonically or by video conferencing will be known as a "remote" meeting. Understanding that hybrid and remote meetings are sometimes necessary, City team members will facilitate participation in these meetings.

2.3.1 *Public comment at electronic meetings.* Public comment at an electronic meeting, if otherwise allowed under these Bylaws, will be conducted as set forth in BA 6.

BA 2.4 Requirements for electronic meetings. A hybrid or remote meeting may be held if all the following conditions are met:

BA 2.4.1 *Communications requirements.* All Council members, City team members whose presence is required under these Bylaws or is otherwise necessary, and the public can hear one another clearly, can communicate with one another as allowed under these Bylaws, and can hear all discussion and testimony and read all meeting information in a manner designed to enhance participation;

BA 2.4.2 *Voting requirements.* All votes are conducted by roll call or by display and documented as set forth in these Bylaws; and

BA 2.4.3 *Public comment.* The public may submit written comments or be heard virtually if allowed under these Bylaws and if reasonably practicable considering the reason why the meeting is being held remotely, and subject to reasonable limits imposed by the presiding officer.

BA 2.5 Notice. To the extent practicable, a meeting notice for a meeting that is conducted as a hybrid or remote meeting will advise the public that the meeting is being held in a hybrid or remote format and how to access, observe, and participate in the meeting as appropriate. The notice will also advise that unanticipated technological issues that prevent a meeting from being held in a hybrid format do not constitute grounds for canceling the meeting.

BA 2.6 Electronic participation by a Council member (a "hybrid" meeting). A Council member or members may participate in a meeting by telephone or video conferencing using a platform approved by the City when the member has good cause to be away due to a personal or family emergency, or for another unforeseen reason, and if the conditions set forth in section BA 2.4 above are met. The member participating remotely must be in a location with good connectivity by telephone or internet and that is free from distractions that could disrupt the meeting.

BA 2.6.1 *Video participation preferred.* Video conferencing is the preferred method of electronic participation. If video conferencing is not feasible, a telephone connection is acceptable. If a member is participating by video, their video camera must be on throughout the duration of the meeting.

BA 2.6.2 *Arranging for remote participation.* The clerk will make reasonable efforts to afford a member not physically present at a meeting an opportunity to participate in the meeting electronically as otherwise set forth in these Bylaws. Understanding that remote participation in an in-person meeting requires advanced work by City team members, a member wishing to participate electronically in an in-person meeting must:

BA 2.6.2.1 Notify clerk. Notify the clerk of the member's need to participate remotely no later than 24 hours before the start of the meeting; and

BA 2.6.2.2 Timely initiation. Initiate electronic participation no later than ten minutes before the scheduled meeting time.

BA 2.6.3 *Connection failure.* The presiding officer may discontinue a member's electronic participation in a meeting if technological issues result in communications from the remote member being unintelligible or unclear to the meeting participants, or where a member's electronic participation results in delays or interferes with the meeting due to repeated loss of connectivity, poor quality of the connection, or similar issues. The presiding officer will state the reason for discontinuing a member's participation and the time the member's participation is discontinued. The member will be listed as "absent" for the rest of the meeting. The member will be re-admitted to the meeting if the technological issues are resolved such that the member's communications are clear to other meeting participants. If a member is re-admitted, the mayor will state the time the member was readmitted to the meeting.

BA 2.7 Remote meeting. The Council may conduct a Council meeting as a remote meeting if the city manager, after consultation with the mayor, determines that an in-person meeting is imprudent or impossible due to a technical issue, civil emergency, emergency, disaster, city-wide health concern, adverse weather conditions, or other circumstances affecting the City and if the conditions set forth in section BA 2.4 above are met.

BA 2.8 Quasi-judicial hearings.

BA 2.8.1 *Hybrid meeting.* As noted in the exception to B 2.6.1, a member who attends a meeting remotely will not be considered present for the purpose of establishing a quorum for a quasi-judicial public hearing held during that meeting. A member may not actively participate in a quasi-judicial public hearing or vote on the outcome of the quasi-judicial public hearing in recognition that electronic participation has limitations, including limitations on the ability to fully evaluate a speaker's non-verbal cues in assessing veracity or credibility, and to observe non-verbal communication including that which occurs in explaining charts and graphs during a speaker's presentation or testimony. A member attending a meeting electronically may listen to and view a quasi-judicial hearing.

BA 2.8.2 *Remote meeting.* If a quasi-judicial hearing is set at a meeting that is held in a remote format, the manager will timely advise the applicant of the circumstances and give the applicant the option of proceeding with a remote public hearing or continuing it to the next available regular or special meeting at which a quorum will be physically present. The applicant's decision will be determinative.

BA 2.8.2.1 Applicant responsibility. The applicant must respond to the manager's request in writing by noon local time on the day of the meeting, or the matter will be continued until the next available regular or special meeting.

BA 2.8.2.2 Written waiver by applicant. Should the applicant choose to move forward with the public hearing, the applicant must waive any legal challenge to the public hearing being conducted remotely in writing by noon local time on the day of the meeting, or the matter will be continued until the next available regular or special meeting.

BA 2.8.2.3 Documents. Deadlines for the submission of documents for meetings that are held remotely will be as set forth in section BA 8.3.4.

BA 2.8.2.4 Public participation. The City will make accommodations for virtual public participation should the applicant opt to move forward with the public hearing. Public comment during a public hearing held during a remote meeting will be conducted in accordance with BA 7.

BA 2.8.2.5 Conduct of hearing. The hearing will otherwise be conducted in accordance with the Bylaws governing electronic meetings and public hearings set forth herein, including that written evidence and public comments will be accepted and made part of the record.

BA 2.9 Effect of electronic participation. Except as otherwise noted herein, a member who participates in a meeting by electronic means consistent with these Bylaws will be considered "present" at the meeting for the purpose of establishing a quorum and is entitled to vote on matters at the meeting. A member who participates in a meeting electronically may participate in a public hearing related to a legislative or an administrative matter.

BA 2.10 Telephonic or electronic participation by a presenter or speaker. Electronic participation in a Council meeting by a presenter or a speaker in a hybrid meeting may be allowed at the sole discretion of the city manager. As noted elsewhere in these Bylaws, members of the public are encouraged to engage with Council members by email, through the City's electronic complaint or engagement system, at City-sponsored open houses or other similar meetings, via social media, by letter, and by telephone.

BA 2.11 Discontinuation of electronic participation in a meeting. The presiding officer may discontinue the participation of a member in a hybrid meeting as set forth in BA 2.6.3. If this results in the loss of a quorum, the meeting will be deemed adjourned. The item under consideration at the time the quorum is lost as well as all other remaining items on the agenda. Such items will be rescheduled for the next available regular or special meeting of the Council. A remote meeting may be discontinued by the presiding officer if technical difficulties make it impossible to continue the meeting. The item under consideration at the time the quorum is lost

as well as all other remaining items on the agenda. Such items will be rescheduled for the next available regular or special meeting of the Council.

Bylaws Appendix 3 - Duties and Privileges of the City Council and Council Members

BA 3.1 Oath of office. The presiding municipal court judge or city clerk will administer the oath of office to all newly elected or re-elected Council members at the first regular meeting after a Council election, and to a newly appointed member as soon as is practicable after a Council vacancy is filled.

BA 3.2 Duties. Each member must fulfill their duties as set forth in the Charter, the City Code, these Bylaws, and applicable policies. Each member will review current agenda items and future agendas and provide feedback to team members as appropriate. Each member must timely complete any administrative duties including but not limited to signing documents as authorized by the Council or as otherwise required to facilitate the flow of work by City team members.

> BA 3.2.1 *Representing Council positions*. Members may express their personal opinions and state how they voted on a matter before the Council. Members should use reasonable care to ensure they accurately represent positions taken by Council as a whole.

BA 3.3 Conduct.

> BA 3.3.1 *Generally.* Members are expected to abide by the City's personnel rules and City policies to the extent they apply to members and to otherwise act in accordance with the City's Code of Ethics.
>
> BA 3.3.2 *Meetings.* Members are encouraged to ask questions about an agenda item well before the meeting to allow team members to research the matter and provide an answer before or during the presentation as appropriate. Members will confine themselves to speaking to the merits of an issue or of the question under debate, and refrain from impugning another's motives.

BA 3.4 Mayor pro tem. The mayor pro tem will be elected at the first regular meeting following each Council election and serve at the pleasure of the Council. The election of the mayor pro tem will be the first order of business after new members of the Council are sworn in.

> BA 3.4.1 *Selection process.* Prior to voting, the mayor will poll members about whether they are willing to serve as the mayor pro tem. The mayor will nominate each member willing to serve as the mayor pro tem. Next, each member will vote for one candidate. The mayor will announce the vote total for each candidate. If one candidate receives the vote of a majority of members present, that candidate will become the mayor pro tem.
>
> BA 3.4.2 *Ties; final selection.* If two or more candidates are tied for the highest vote, the mayor will announce the vote total of all candidates, and the Council will vote until one of the tied candidates receives the vote of a majority of members present. If the tied candidates are not the highest vote getters, and no other candidate has received a majority vote of those present, the mayor will announce the vote totals, and the Council will vote only for the tied candidates to determine which of the tied nominees will remain in the balloting with the top vote getter. Successive votes will be taken until one of the tied candidates receives the vote of a majority of those present to face the top vote getter. The mayor will then call for a vote for one of the two remaining candidates to become the

mayor pro tem. Successive votes will be taken until one of the two candidates receives a majority vote to become the mayor pro tem.

BA 3.4.3 *Mayor pro tem vacancy.* In the event of a vacancy in the position of mayor pro tem, a successor will be elected in the manner set forth herein as soon as is practicable after the vacancy occurs.

BA 3.4.4 *Mayoral vacancy.* In the event of a vacancy in the office of the mayor or the disability of the mayor, the mayor pro tem will perform all the duties of the mayor and have all the powers of the mayor until a new mayor is chosen as set forth in Charter section 4.6. See also Charter section 4.5.

BA 3.5 Attendance required. Among the primary ways City Council members serve the public is by attending all City Council meetings for the entire length of each regular business, workshop, study session, special, and emergency meeting. No Council member may be excused from attendance at a meeting except upon the affirmative vote of the majority of Council members present. No member may leave a meeting while it is in progress except for a personal emergency and with the permission of the presiding officer. If a member leaves without permission, their absence will be deemed unexcused. See Charter section 4.6. In the interests of transparency, and unless directed otherwise by the Council, the city clerk will make available on the City's website no later than January 31 of each year a list of absences (including excused absences) for each Council member for the previous calendar year.

BA 3.5.1 *Seating.* Members will occupy the respective seats in the chamber as assigned by the mayor. However, any two members may exchange seats by joining in a written notice to the mayor.

BA 3.6 Committees, Boards, Councils, and Commissions.

BA 3.6.1 *Appointment of member to Council committees.* In addition to their Council responsibilities representing their constituents through policy-making decisions for the City, the Council may create standing or special Council committees as circumstances require. These committees may be established in consultation with the city manager or city attorney as appropriate to serve a specific purpose or as may be set forth in Council policy and disbanded when the need for the committee no longer exists or as otherwise set forth in Council policy. Membership on a Council committee will be designated by a consensus of the Council. A member may serve on one or more of these committees at a time.

BA 3.6.2 *Appointment of member to regional, state, or national committees.* The Council may appoint a member or members of the Council to a regional, state, or national committee, board, council, or commission as set forth in City Code section 2-78 and City Council Policy 200.2, and in accordance with the policies or rules of that committee, board, council, or commission. A member may be removed from a committee as set forth in City Code section 2-78.

BA 3.6.3 *Appointment of citizens to city committees.* The Council may create boards, commissions, and committees as set forth in section 9.1 of the Charter. The Council will

appoint citizens to and may remove them from City advisory or steering boards, commissions, and committees as set forth in City Code section 2-78 and in City Council Policy 200.1.

Bylaws Appendix 4 - Executive Session Procedures

BA 4.1 Generally. The Council may hold an executive session at any time during any meeting. Each executive session will be held in accordance with the OML.

> BA 4.1.1. *No formal action.* No formal action may be taken on a topic discussed during the executive session. The Council may not adopt a proposed policy, position, resolution, rule, or regulation during an executive session. No formal action by the Council is valid unless Council has complied with the meeting and notice requirements of the OML.

BA 4.2 Notice. Whenever possible, an executive session should be noticed on the Council agenda. The notice should include the topic and the statutory justification for the executive session. Notwithstanding the foregoing, the Council may hold an executive session if a motion to move into an executive session is approved.

BA 4.3 Procedure.

> BA 4.3.1 *Motion; topics allowed.* To hold an executive session, the presiding officer will note the need for an executive session, and with the assistance of the city attorney, if appropriate, announce the topic of discussion at the executive session. A member must make a motion to move into an executive session. Because the topics for executive sessions are limited to those set forth in C.R.S. section 24-6-402(4), the announcement must include the specific citation within that statute allowing for the executive session and must identify the matter to be discussed in as much detail as is reasonably practicable without compromising the purpose for which the executive session is being requested.
>
> BA 4.3.2 *Vote to hold*. The Council must then vote on whether to hold the executive session as described. The motion will be approved upon an affirmative vote of two-thirds of the members present.
>
> BA 4.3.3 *Vote to leave.* A member must make a motion to leave an executive session. The Council must vote on the motion. The motion will be approved upon an affirmative vote of a majority of the members present.

BA 4.4 Hybrid or remote participation. A member participating electronically in an executive session is responsible for providing a secure telephone or electronic connection using a platform approved by the City. The member must ensure that no other person is present with them or has access to the meeting during an executive session.

BA 4.5 Other resources. Team members may create and use any form or other tool to aid in efficiently calling for or holding an executive session.

Bylaws Appendix 5 - Procedures Related to the Approval of Ordinances and Resolutions

BA 5.1 Ordinances generally. Each ordinance must comply with Charter sections 5.7 through 5.9, as applicable, and the following procedure. No ordinance may be placed on a consent agenda.

BA 5.1.1 *First reading*. An ordinance may be introduced on first reading at any regular business or special meeting. If an ordinance has been made available to the Council and the public before its consideration, it will be read by title only; otherwise, it will be read in full. An ordinance may be amended on first reading at the sole discretion of the city manager. If approved on first reading, it will be set for public hearing and published in full. The publication will set forth the date, hour, and place at which the public hearing will be held.

BA 5.1.2 *Second reading and public hearing.* The ordinance will be presented to the Council a second time for final approval at a meeting held not earlier than seven days after publication for the final passage, rejection, postponement, or to table the ordinance, or for other action. This meeting will be the same meeting at which the public hearing on the ordinance is held. The ordinance will be presented by a member at the second reading and public hearing by reading the title only and then opened to public hearing. An ordinance may be amended at any time before final passage upon Council's vote.

BA 5.1.3 *Publication.* An ordinance may be published by title or in full, unless it has been amended, in which case it must be published in full after final passage.

BA 5.2 Amendment to an existing ordinance. An ordinance that amends an existing ordinance will be titled as such and must be accompanied by an exhibit outlining any redlined and strikethrough notations; however, if the amendment is a repeal and reenactment of an existing ordinance and publishing a redlined and strikethrough version would not enhance understanding of the changes made to the original ordinance, then the amendment is not required to be accompanied by a redlined and strikethrough document.

BA 5.3 Codes adopted by reference. The publication of a code adopted by reference must contain a summary of the subject matter of the code and a notice that copies of the code being adopted by reference are available at the city clerk's office. See Charter section 5.8.

BA 5.4 Emergency ordinances. The adoption of an emergency ordinance must comply with all requirements set forth in Charter section 5.9. An emergency ordinance will take effect upon passage. Publication will be within ten days, or as soon thereafter as possible. If an emergency ordinance fails to receive the required number of votes, it will have the same standing it would have had if it had not been introduced as an emergency measure.

BA 5.5 Resolutions generally; intergovernmental agreements (IGAs). Resolutions must be made in written form. Public comment is allowed for resolutions under BA 6.2.1. An IGA will be adopted by resolution in accordance with Council policy. If the Council approves an IGA, the city manager may take whatever administrative action is necessary to implement it.

BA 5.6 Failure to act. Except for matters that have been continued or rescheduled under section 2.11, failure by the Council to act on an ordinance upon first or second reading or on a resolution upon its reading means the matter has failed.

Bylaws Appendix 6 - Public Comment at Meetings

BA 6.1 Generally. The City provides the public with many opportunities to contact Council members about matters of public importance, including but not limited to by email, through the City's electronic complaint or engagement system, at City-sponsored open houses or other similar meetings, via social media, by letter, by telephone, and by comment at a Council meeting on an issue not on a meeting agenda in accordance with this **Appendix 6**. The City also values the transaction of City business in ways that are responsible and efficient. It endeavors to be respectful of and fair to those who must be present for business scheduled on the agenda. A public comment period at a Council meeting is a limited public forum. These Bylaws balance the interests of individuals who wish to speak at Council meetings with the public's interest in ensuring that City business is conducted timely and efficiently.

BA 6.1.1 *When allowed.* Public comment is allowed at regular business and special meetings. Public comment is allowed at workshops and emergency meetings at the sole discretion of the presiding officer. If allowed, it will proceed in generally the same manner as set forth herein, except that there will be only one public comment period at these meetings. Public comment is not allowed at study sessions or at informal meetings of the Council. Only those Council members, City team members, and other speakers recognized by the presiding officer are permitted to address the Council at a meeting.

BA 6.1.2 *Comment at public hearings.* Public comment on a matter for which a public hearing is held will proceed in accordance with **Appendix 7**.

BA 6.2 Procedure. The Council provides two separate times for public comment during regular business meetings. The total time for each public comment period will not be time-limited; however, each speaker's individual time to speak within the public comment period is subject to the limitations set forth below. A speaker may comment on any issue that is not the topic of a public hearing.

BA 6.2.1 *First public comment period.* The first public comment period will occur near the beginning of the agenda. Each speaker at the first public comment period will be limited to no more than three minutes to express their views.

BA 6.2.2 *Second public comment period.* The second public comment period will occur near the end of the agenda. Each speaker at the second public comment period will be limited to no more than five minutes to express their views.

BA 6.2.3 *Limitations on time.* The presiding officer, with the consensus of the Council, may limit the time of each speaker at the beginning of either the first or second regular public comment period beyond what is provided herein. However, all speakers during that public comment period must be subject to the same time limitation.

BA 6.2.4 *Special meetings.* Due to the limited nature of city business conducted at a special meeting and understanding that the agenda for the meeting is set by the city manager in accordance with BA 9.3, the presiding officer will call for public comment on any business item on the agenda in accordance with the procedure set forth below. No other public comment periods may occur at a special meeting.

BA 6.3 Procedure.

BA 6.3.1 *Speaker's form.* To ensure those wishing to speak at a Council meeting are properly recognized by the presiding officer, each person wishing to address the Council during public comment will be asked to complete a speaker's form that lists their name, address, and any other information deemed relevant by the clerk. The clerk will compile a list of those wishing to speak and provide the list to the presiding officer before each public comment period. Due to potential cybersecurity risks, the clerk may not accept for use at public comment a flash drive or other similar data storage device used to transfer electronic data.

BA 6.3.2 *Order of speakers*. The presiding officer will declare the public comment portion of the meeting to be open and then call each speaker to the podium in the order they signed up to speak, except that the presiding officer may give priority to a speaker who is a resident of Arvada during any public comment period. The presiding officer will ask the speaker to state their name and their address, neighborhood, subdivision, or Council district.

BA 6.3.3 *Facilitation of public comment.* The presiding officer is authorized to facilitate the orderly flow of speakers at public comment. To reduce the potential for noise or sound interference, only one person at a time may be present at the microphone during public comment, except for those needing interpretive assistance or those with a disability requiring the assistance of a third party, or unless, in the sole discretion of the presiding officer, more than one speaker should be allowed at the podium during public comment. Once a speaker has been recognized by the presiding officer, any speech, sound, or expressive activity made or generated by the speaker will be considered part of that speaker's allotted time for timer purposes. City team members will silence the microphone of any speaker who exceeds their allotted time as shown on the Council chamber's timer system.

BA 6.3.4 *Speaking at both public comment periods.* A person who speaks during the first public comment period may also sign up to speak during the second public comment period and may speak about the same or different topics during the second public comment period. However, to ensure that as many different speakers as possible are heard, a person who spoke at the first public comment period will be recognized by the presiding officer at the second public comment period only after the speakers who signed up to speak at only the second public comment period have been heard.

BA 6.4 Virtual comments. Because members of the public have multiple opportunities to engage with Council members on issues of public importance, virtual public comments are not allowed except at a meeting that is held in a completely remote format, and then only in accordance with these Bylaws.

Bylaws Appendix 7 - Public Hearings

BA 7.1 Purpose. A public hearing provides an opportunity for a person to be heard on a specific agenda item requiring a public hearing. A public hearing may relate to a legislative matter (e.g., an ordinance impacting everyone in the City), be quasi-judicial in nature (e.g., held on a zoning or land use issue), or be administrative in nature.

BA 7.2 Time. No public hearing may be set before 6:00 p.m. local time.

BA 7.3 Procedure. Matters relating to the speaker's form, the order of speakers, and the facilitation of public comment will be handled in accordance with BA 6.3, except that in the case of a public hearing, each speaker must indicate which side of the issue they wish to speak upon. With the consensus of the Council, the presiding officer may limit the time of each speaker at a public hearing as set forth in BA 6.2.3, and, if each speaker's time is limited, may also limit the time allotted to a spokesperson speaking under a pooling agreement as noted in BA 7.6 below.

> BA 7.3.1 *Comments made available.* The clerk will make available to members before the public hearing all written comments relating to that hearing that were received by the clerk by noon on the day of the hearing.

BA 7.4 Quasi-judicial matter – even number of members present. If an even number of Council members are present at a meeting during which a quasi-judicial hearing is scheduled, and if an applicant for the matter at issue is present, the manager will timely advise the applicant of the circumstances and give the applicant the option of proceeding with the hearing or continuing it to the next available regular or special meeting at which all members will be present. The applicant's decision will be determinative. If the applicant is not present, the members present will decide by consensus whether to proceed on the item. The clerk will record the consensus of Council on this question.

BA 7.5 Order of business—quasi-judicial public hearing. The presiding officer will announce the agenda item, declare the public hearing open, and conduct the hearing as follows:

> BA 7.5.1 Call upon a City team member to briefly describe or present the item under consideration. A team member will review the item and enter any exhibits (e.g., staff report, maps, mailing affidavit, posting log, etc.) into the record.
>
> BA 7.5.2. Each member of the public who gives testimony during the public comment portion of the public hearing will be limited to no more than three minutes to express their views on the item before the Council. All those giving testimony should direct their comments to the Council. The applicant or their representative will be allotted extra time following public comment for rebuttal.
>
> BA 7.5.3 Ask all speakers to attest or swear by oath that all statements and evidence they present will be the truth.
>
> BA 7.5.4 Call the applicant or proponent to the podium, if appropriate. Invite the applicant to present information or comments about the matter.

BA 7.5.5 Open the public comment portion of the hearing. If one or more members of the public have signed up to speak at the hearing, call them to the podium in order that they signed up to speak, except that the presiding officer may give priority to a speaker who is a resident of Arvada. The presiding officer will ask the speaker to state their name and address or the nearest cross streets, neighborhood, subdivision, or Council district.

BA 7.5.6 Declare the public comment portion of the hearing to be closed.

BA 7.5.7 Call for questions from or discussion by the Council. A member may question an applicant, a representative of an applicant, a person who has spoken during the public comment portion of the hearing, or a City team member during this stage of the hearing. Should a member wish to ask a question, the presiding officer will acknowledge the Council member and allow the member to ask the question. Members will refrain from asking a question that is irrelevant, redundant, or is primarily designed to embarrass an individual. A response to a question will be limited to answering the question as stated. Once all Council members have discussed the matter, the presiding officer will declare the public hearing to be closed.

BA 7.5.8 Call for a motion, if any, call for a vote on the motion, and close the matter once the vote is recorded.

BA 7.6 Pooling agreements. In-person speakers may "pool" time during the public comment portion of a public hearing. To pool time during a public hearing, a spokesperson must present to the clerk by noon the day of the meeting the names of at least three other individuals who wish to yield their three minutes to the spokesperson. At the time the spokesperson is called to the podium during the public comment portion of the public hearing, the clerk will confirm that at least three of the individuals who have yielded time to the spokesperson are present in the chamber. If fewer than three individuals who have yielded time to the spokesperson are present, the pooling agreement will be considered void, and the spokesperson will be limited to three minutes. In this case, other speakers whose names were presented to the clerk as part of the pooling agreement and who are present may each speak for up to three minutes during the public comment portion of the public hearing. Pooled time will not be yielded to a spokesperson on a minute-by-minute basis; instead, a spokesperson may speak for no more than ten minutes.

BA 7.7 Order of business – other public hearings. The procedure and order of business for other public hearings will be generally the same as that for quasi-judicial hearings, except that after the item is presented by a team member, the presiding officer will call for public comment, except that there is no need to have public comment speakers attest or swear by oath that all statements they present will be the truth if they are merely providing their opinions about the issue before the Council. Speakers at other than quasi-judicial public hearings may participate in pooling agreements as set forth in this Appendix 7. The presiding officer may set a reasonable time limit for each speaker; the same time limit will apply to all speakers during that public hearing, except that spokespersons for "pooled" comments will be allowed more time as set forth in BA 7.6 above.

Bylaws Appendix 8 - Roles of City Team Members

BA 8.1 The city manager. The city manager will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, in Council policies, and as otherwise required by statute or by contract. The manager will attend all Council meetings and may take part in discussions of all matters concerning the welfare of the City.

BA 8.1.1 *Agenda duties.* Except as otherwise set forth herein, the manager will set the agenda for all Council meetings and determine which matters are to be included on the consent agenda in consultation with the Council. The manager will ensure that each agenda item is accompanied by information including but not limited to background or contextual information, information about the substance of the item, the financial impact of the item, if applicable, and the department or work system requesting consideration of the item.

BA 8.1.2 *Presentations.* The manager may direct the clerk to schedule a presentation on a matter of significant interest at a regular business or special meeting. A presentation must be placed on the agenda no later than noon on Thursday before the meeting or the matter will be placed on the agenda for the next regular business or special meeting.

BA 8.2 The city attorney. The city attorney will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, in Council policies, and as otherwise required by statute or by contract. The city attorney will attend all Council meetings and may take part in discussions of all legal matters concerning the welfare of the City.

BA 8.2.1 *Agenda duties.* The city attorney must approve each resolution and ordinance as to form and in writing. No ordinance providing for an appropriation of money may be approved unless the accompanying information notes the appropriation and the fund to which it is to be charged, and unless the item has been approved by the finance director.

BA 8.3 The city clerk. The clerk will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, Council policies, and otherwise as required. The clerk will maintain these Bylaws and Council policies, serve as the clerk for Council meetings, and perform all duties attendant thereto, including but not limited to recording the roll, scheduling meetings and unfinished business, recommending the setting of public hearings, keeping meeting minutes, and performing other meeting duties as directed by the presiding officer, the Council, or the manager.

BA 8.3.1 *Agenda preparation.* The clerk will prepare each meeting agenda at the direction of the manager. The clerk will work with the manager and the city attorney to schedule public hearings and executive sessions. The clerk will ensure that each agenda item submitted is in an acceptable format and is accompanied by the relevant ordinances, resolutions, or motions. The clerk may reject an item that is not timely submitted or does not satisfy the City's formatting or accessibility requirements.

BA 8.3.2 *Agenda items*. The clerk will assign each item a number and a descriptive title. Each bill number assigned to an ordinance will follow that ordinance until final passage at which time the proper number for recording shall be assigned. The clerk will complete

all other administrative tasks related to the placement of items on the agenda to ensure the proper recording and tracking of each item.

BA 8.3.3 *Distribution.* The clerk will deliver the agenda packet to each member at least one week before the meeting. The clerk may revise the agenda at the direction of the manager before 5:00 p.m. local time on the Friday before the meeting. The clerk will deliver the final packet to each member on the Friday before the meeting, except that an agenda for an emergency meeting may be revised at any time and provided to members by whatever means are reasonably available and as early as circumstances reasonably allow, given the nature of the emergency. The final agenda, including revisions, will be made available to the public in accordance with the OML. Each packet will set forth each agenda item by number and descriptive title and contain all documents deemed relevant as determined by the manager and city attorney. Packets will be delivered electronically unless a member requests a hard copy. A change to an agenda made at or after 5:00 p.m. local time on the Friday before the meeting will be addressed by Council during the Council meeting.

BA 8.3.4 *Requirements for visual materials*. The clerk may promulgate reasonable policies and rules for the presentation of visual materials at Council meetings and will make those policies and rules known to those authorized to make a presentation at a meeting. Individuals, not including those on the City team, wishing to submit a slide presentation, video or still images, audio recordings, or other similar presentation materials must submit the materials to the city clerk no later than noon on Thursday before the meeting at which the presentation is to be made. The clerk, working in conjunction with KATV Channel 8 team members, will ensure that the materials are of a technical quality appropriate for or compatible with the projection equipment used for the Council chamber, and return materials that are not appropriate or compatible. Nothing in this section authorizes a member of the public to use the City's video projection equipment during public comment.

BA 8.3.5 *Timer system.* The clerk will provide and provide for the operation of a timer system to monitor each speaker's time during public comment and to track the total time used by the proponents and opponents of an agenda item or matter under consideration at a public hearing. The timer system will not apply to Council members or city team members.

BA 8.3.6 *Video recordings*. The clerk will make video recordings of Council meetings available for viewing by the public.

BA 8.3.7 *Use of the chamber.* The city clerk will manage the chamber when the Council is not in session. The chamber is open to members of the public only when the Council is in session, and then only for limited purposes and in accordance with the rules set forth in these Bylaws. When the Council is not in session, the chamber may only be used by city team members, by the Municipal Court subject to Court rules, and by elected officials from other governmental entities with the prior approval of the clerk.

BA 8.4 The chief of police. The chief of police or designees thereof will act as the sergeant-at-arms during meetings to assist with the orderly progress of the public's business and may take

any reasonable action to help ensure decorum at meetings and may enforce laws to ensure the safety of those in attendance.

Bylaws Appendix 9 – Order of Business at Council Meetings

BA 9.1 Regular business meeting agenda, generally.

1. CALL THE MEETING TO ORDER
2. MOMENT OF REFLECTION AND PLEDGE OF ALLEGIANCE
3. ROLL CALL OF COUNCIL MEMBERS
4. APPROVAL OF MINUTES
5. PROCLAMATIONS AND COMMUNICATIONS
6. PRESENTATIONS (if any)
7. FIRST PUBLIC COMMENT PERIOD (on issues that are not the topic of a public hearing, on resolutions, and on presentations) (limited to no more than 3 minutes per speaker, and the total length of this public comment period is limited to 1/2 hour or when the tenth speaker has finished, whichever occurs first)
8. NEW BUSINESS
   A. CONSENT AGENDA
   B. RESOLUTIONS
   C. ORDINANCES (first reading of each ordinance)
9. OTHER
10. PUBLIC HEARINGS (second reading and public hearing on each ordinance)
11. SECOND PUBLIC COMMENT PERIOD (limited to no more than 5 minutes per speaker)
13. REPORTS FROM THE CITY COUNCIL
    A. Council committee reports
14. REPORTS FROM THE CITY MANAGER
15. REPORTS FROM THE CITY ATTORNEY
16. ADJOURNMENT

BA 9.1.1 Unfinished business. Unfinished business from a regular business meeting or a special meeting may be set on the agenda of a subsequent regular business meeting unless minutes from a previous meeting must be approved first.

BA 9.2 Workshop or study session meeting agenda, generally.

1. CALL TO ORDER
2. ROLL CALL OF COUNCIL MEMBERS
3. WORKSHOP / STUDY SESSION TOPICS
4. ADJOURNMENT

BA 9.3 Special meeting agenda. Because of the limited nature of city business transacted at a special meeting, the agenda for a special meeting differs from that used for a regularly scheduled business meeting. The agenda will be set by the city manager in consultation with the Mayor and the Council and noticed as set forth in the Bylaws.

BA 9.4 Emergency meeting agenda. The agenda for an emergency meeting will be set by the manager in consultation with the Mayor and the Council to the extent practicable given the nature of the emergency.

BA 9.5 Changes to an agenda. The City Council may add or delete an agenda item or otherwise change an agenda in accordance with subsections 2.7.4 and 4.1 of these Bylaws.

CITY OF ARVADA
CITY COUNCIL BYLAWS

History:

Adopted (Effective April 21, 2026) (R26-009)

City Council Rules of Procedures Governing Meetings:
(Repealed April 21, 2026) (R26-009)
Amended May 18, 2020 (effective May 18, 2020) (R20-041)
Amended December 3, 2018 (effective January 1, 2019) (R18-133)
Amended February 6, 2012 (R12-015)
Amended June 6, 2011 (R11-074)
Amended July 2, 2007 (R07-076)
Amended November 4, 2002 (R02-179)
August 2, 1999 (R99-147)
Effective June 5, 1995 (R95-130)
(For earlier history, see the city clerk's office)

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1. BYLAWS GENERALLY

1.1 Short title. These Bylaws will be known as the Council Bylaws or the Bylaws. They consist of these Bylaws and several appendices. Information set forth in the appendices carry the same authority as information set forth in the Bylaws.

1.2 Purpose. These Bylaws are intended to facilitate the Council's ability to conduct the City's business fairly and transparently. These Bylaws are to be used in conjunction with Bob's Rules of Order noted below. Together, these documents establish rules of procedure for meetings and promote fair and consistent meeting practices. They help define roles and responsibilities for members of Council and for City team members. They provide the structure to accomplish City business in an organized and transparent manner and provide the flexibility needed to ensure that City business is completed efficiently.

1.3 Authority. These Bylaws are established and adopted in accordance with Charter section 5.1.

> 1.3.1 *Review of; Amendment to.* These Bylaws will be reviewed no less often than once every five years. The Council may at any time and by resolution amend, restate, or rescind these Bylaws or any portion thereof. The resolution must be approved by the city attorney as to form and placed on a Council meeting agenda under "New Business."

1.4 History. These Bylaws were previously known as the City Council Rules of Procedures. The Council wishes to repeal the Rules and adopt the City Council Bylaws. These bylaws will be the rules of procedure governing meetings as required by Charter section 5.1. These Bylaws supersede all Rules of Procedures previously adopted by the City Council.

1.5 Definitions. The following words, terms, and phrases, when used in these Bylaws will have the meaning ascribed to them in this section except where the context clearly indicates a different meaning.

> *Charter* means the Arvada City Charter.
>
> *Chief of police* means the chief of the Arvada Police Department or designee thereof.
>
> *City attorney* means the Arvada city attorney or designee thereof.
>
> *City clerk* or *clerk* means the clerk of the City of Arvada or designee thereof.
>
> *City Council or Council* means the collective Arvada City Council including the Mayor and Mayor pro tem.
>
> *City manager* or *manager* means the city manager of the City of Arvada or designee thereof.
>
> *City team* or *City team member* means an employee or employees of the City of Arvada including but not limited to the city manager, city attorney, city clerk, and the chief of police. For the purposes of these Bylaws, City team or City team member does not include a member of the City Council.

Council member or *member* means a person elected or appointed to the Arvada City Council and currently serving on the Council including the mayor and mayor pro tem.

Election means an election in which vacancies are filled on the Council.

Emergency means and includes a civil emergency, a disaster, or an emergency as those terms are defined in section 26-33 of the Arvada City Code.

Colorado Open Meetings Law or the *OML* means the laws set forth at C.R.S. §24-6-401 *et seq.* as may be from time to time amended that set forth rules related to holding public meetings.

Holiday has the same meaning as that set forth in the personnel chapter of the City Code.

Speaker means a person authorized through these Bylaws to address the Council during a public comment or a public hearing.

Writing or *written* means a communication made via hard (paper) copy or by electronic mail message.

1.6 Parliamentary authority (rules of procedure). Except as is otherwise set forth in the City Code or these Bylaws, *Bob's Rules of Order for Colorado Local Governments: Simplified Parliamentary Rules for Public Meetings* (2023), as may be from time to time amended, will be the parliamentary authority for all Council meetings. These rules of procedure will be known as Bob's Rules. They will govern the conduct of Council meetings. Bob's Rules are adopted as if they are set forth in full herein, with the following deletions and amendments:

1.6.1 *Deletion.* Rule 5.3, which states that a motion requires a second, is hereby deleted from Bob's Rules as adopted by the Council. No motion requires a second.

1.6.2 *Deletion.* Rule 5.4, which requires the presiding officer to acknowledge that a motion is properly stated and seconded, is hereby deleted from Bob's Rules as adopted by the Council. The presiding officer is not required to acknowledge that a motion is properly stated and seconded.

1.6.3 Amendment. Rule 6.1 of Bob's Rules is hereby amended in its entirety to read as follows: "Rule 6.1 ~~A Friendly Amendment is authorized only for a debatable motion.~~ Notwithstanding any other provision of Bob's Rules, if a Council member moves to amend a motion, the presiding officer will call for a vote on the amendment and members will vote on the amendment. The presiding officer will then call for a vote on the underlying motion, as it may or may not be amended, and Council members will vote on the motion."

1.6.4. *Amendment.* Rule 6.2 of Bob's Rules is hereby amended in its entirety to read as follows: "Rule 6.2 A Friendly Withdrawal is authorized only for a debatable motion. Notwithstanding any other provision of Bob's Rules, if a Council member moves to make or amend a motion, that Council member may withdraw the motion or amendment, including a friendly amendment, at any time prior to the presiding officer calling for a vote on that motion or amendment."

1.7 City Council Policy Manual – adoption of. The Council has adopted and may continue to adopt City Council policies to provide guidance and clarity about Council matters not addressed in these Bylaws. With the Bylaws, the City Council Policy Manual is intended to provide a decision-making framework, outline expectations for Council members, encourage accountability, help mitigate the risks inherent in operating a large municipal corporation, and promote a positive working environment.

1.7.1 *Review of; Amendment to.* Each Council policy will be reviewed no less often than once every five years. The first review of a Council policy in effect at the time of the adoption of these Bylaws may occur at the same time as the first review of the Bylaws. The Council may, by resolution, adopt, amend, restate, or rescind Council policies or any portion thereof. The resolution must be approved by the city attorney as to form and placed on a Council meeting agenda under "New Business."

1.8 Conflicts. To the extent there is a conflict between any portion of these Bylaws, Council policies, the Charter, the Arvada City Code, or Bob's Rules, then Charter provisions, City Code provision, these Bylaws, Council policies, and then Bob's Rules will prevail, in that order.

1.9 Guidance. Understanding the Charter, the Code, these Bylaws, Council policies, and Bob's Rules cannot anticipate every situation that the Council might encounter in planning for or holding meetings or engaging in other business, these Bylaws and Council policies are to be used to assist Council members and City team members make informed decisions in those situations. A course of action on a matter not addressed in these Bylaws or a policy should be one that reflects City values and that enhances the fairness, transparency, and efficiency of City and Council operations.

2. MEETINGS GENERALLY

2.1 Types and schedule of meetings. The Council will hold regular business meetings and may hold workshop meetings, study session meetings, special meetings, and emergency meetings for the purposes outlined in and generally on the days and times set forth in **Appendix 1.**

2.2 Location. All regular business meetings will be held in Council Chambers located in City Hall. Study sessions and informal meeting sessions held before regular business and workshop meetings may be held in the Council Conference Room, also located in City Hall. Meetings may also be held in a completely remote format. The location of a Council meeting may be changed at the sole discretion of the city manager if the meeting and the change in location is properly noticed.

2.2.1 *Electronic participation.* Electronic participation in Council meetings may occur as set forth in **Appendix 2.**

2.3 Notice. All Council meetings must be noticed by the clerk in accordance with the OML. Each meeting notice must be issued at least 24 hours before the meeting, and each notice must include the date, time, and location of the meeting, and specific agenda information where possible. Each meeting notice must be posted on the City's website and may be posted on the City's social media accounts, on KATV8, and otherwise as designated by Council by resolution. Notice of a special meeting or emergency meeting will be provided to members as set forth in

Charter section 5.2. The clerk will notice an emergency meeting by any means reasonably calculated to provide notice to as many members of the public as possible. The clerk will notice the public when remote viewing of or participation in a meeting is available. The clerk will notice a meeting location change as soon as is practicable after the change occurs by means that are appropriate to the circumstances.

2.3.1 *Notice of postponement or cancellation.* The clerk will notice the public of the postponement or cancellation of a meeting as soon as is reasonably possible following the postponement or cancellation by means that are appropriate to the circumstances.

2.4 Presiding officer. In accordance with Charter section 4.5, the mayor will preside over each meeting. The mayor pro tem will serve as the presiding officer when the mayor is unavailable. If the mayor is participating in a meeting by electronic means, and the mayor pro tem is participating in person, the mayor pro tem (or other designated member who is physically present) will preside over the meeting. If both the mayor and mayor pro tem are unavailable, the city clerk will call the meeting to order and call roll. If a quorum is present, a majority of members present will then elect by majority vote a temporary presiding officer who will serve as the presiding officer for that meeting.

2.4.1 *Duties.* The presiding officer will manage the agenda, preserve decorum to help ensure that meetings progress in an orderly and productive manner, and with the assistance of the city attorney as needed, render decisions on questions of procedure in accordance with Charter section 4.5.

2.5 Duties of members. Members' duties and privileges are set forth in **Appendix 3**.

2.6 Quorum. A majority of all members (four members) will constitute a quorum for the transaction of business at all meetings including an emergency meeting. A quorum must be present to conduct any business at a meeting, except that in the absence of a quorum, a lesser number may postpone all unresolved items to the next regular business or other meeting as appropriate and adjourn the meeting to a later time or date. In the absence of all members, the clerk may adjourn any meeting for not longer than one week. See Charter section 5.4.

2.6.1 *In-person attendance not required to establish quorum.* A member will be considered present at a meeting for the purpose of establishing a quorum and for voting if that member is present by video conferencing, telephone, or other similar means of communication.

Exception: A member who attends a meeting remotely will not be considered present for the purpose of establishing a quorum in a quasi-judicial public hearing.

2.7 Voting. Only members of the Council may vote. A formal vote of "yes" or "no" is required for the passage of an ordinance, resolution, motion, to excuse a member from a meeting, to excuse a member from a formal vote on a particular matter under section 2.7.3.1 below, to suspend a Bylaw under section 2.9 below, and for the election of the mayor pro tem. Voting may be by electronic device, voice vote of "yes" or "no" taken by roll call, or a combination of the two. All formal votes will be entered into the record.

2.7.1 *Affirmative vote required.* All ordinances on first reading, resolutions, and motions before the Council will pass upon the affirmative vote of a majority of the members present, except as otherwise required by law or by these Bylaws, and except that an ordinance requires the affirmative vote of four members of the Council for final passage. An emergency ordinance may be approved as set forth in Charter section 5.9. In case of a tie vote on a motion, the motion will be considered lost. See Charter section 5.6. All other matters before Council including but not limited to the approval of the minutes may proceed with a consensus of Council; these matters do not require a "yes" or "no" vote, but rather the general assent of a majority of those members present at the meeting.

2.7.2 *Duty to vote.* A member who is present at a meeting must vote on each matter before the Council for a formal vote at that meeting unless excused by the majority vote of the remaining members, or because of a declared, legal conflict of interest confirmed by the city attorney. A member who abstains from a formal vote or refuses to vote, except when excused due to a conflict of interest or when otherwise permitted to abstain under applicable law, may be subject to sanctions outlined in Arvada City Code section 2-381. See also Charter section 5.6.

2.7.3 *Conflicts of interest.* No member may vote on a matter in which they have a financial interest other than the common public interest, or on a question involving their own conduct. See Charter section 5.6 and City Code section 2-376.

2.7.3.1 Conflict of interest procedure. A request to be excused from a formal vote on a matter due to a conflict of interest should be made when the matter is called and must be made before the presiding officer calls for the vote. After the member has briefly stated the reason for their request, any member may make a motion on the request. No debate is allowed on the motion. All members present, except the one who made the request, must vote on the motion. If excused, the excused member must leave the chamber. That member will be recalled to the chamber once the vote on the matter is taken.

2.7.4 *Consent agenda voting.* The members present will vote on all consent agenda items as a group through one motion.

2.7.4.1 Removal of an item from the consent agenda. If a member wishes to remove an item from the consent agenda, they are encouraged to notify the clerk before the meeting. The members present at the meeting will act on the removed item as a separate matter after voting on the remaining consent agenda items. No motion is needed to remove an item from the consent agenda, but any item removed from the consent agenda requires a motion and the majority vote of members present for passage.

2.8 Executive sessions. An executive session is a portion of a meeting closed to the public that is devoted to a *confidential* discussion of a particular topic as authorized by the OML. An

executive session must comply with the applicable provisions of the OML. Executive sessions will be held in accordance with **Appendix 4**.

2.9 Suspension of the Bylaws. The Council may, by motion, temporarily suspend any provision of these Bylaws not governed by the Charter or the Code. As an example, a provision of the Bylaws may be suspended by the Council for the benefit of a meeting participant in accordance with the Americans with Disabilities Act or to address another unusual circumstance. A motion to suspend must specify which Bylaw or part thereof is to be suspended and the purpose of the suspension. A suspension of a Bylaw will remain in effect throughout the meeting at which the Bylaw was suspended.

2.10 Ordinances and resolutions. Ordinances and resolutions will be processed according to the procedures set forth in **Appendix 5**.

2.11 Adjournment. Except as noted in section 2.6 above, each Council meeting will be adjourned upon a declaration of adjournment by the presiding officer or a motion to adjourn followed by a majority vote to adjourn. If a scheduled item is interrupted by the adjournment, that and subsequent agenda items will be continued to the next regularly scheduled business meeting or other future meeting as determined by the manager.

~~2.11.1 *Late meeting*. Except for an emergency meeting, which may continue for any length of time deemed appropriate by the presiding officer in consultation with the city manager, any meeting that has not been adjourned by 11:00 p.m. local time will be conducted as follows:~~

~~2.11.1.1 Business at hand. The meeting will be limited to the business under consideration at 11:00 local time; activity on the business under consideration at 11:00 may not extend past 11:30 p.m. local time. An agenda item under consideration at 11:30 p.m. local time must be continued until the next regular business meeting.~~

~~2.11.1.2 Hearings continued. All public hearings not previously opened at the meeting will be vacated or will be opened for the sole purpose of setting the hour and day for the continuation of the public hearing. Any public hearing that is continued in this manner must be reset for the next regular business meeting, unless the presiding officer, in consultation with Council members and City team members, determines that another future date is more appropriate.~~

3. OPEN MEETINGS; PUBLIC PARTICIPATION

3.1 Open meetings. All meetings of members of the Council must comply with the Colorado OML. The OML defines a "meeting" as "any kind of gathering convened to discuss public business in person, by telephone, electronically, or by other means of communication." Any time three or more Council members discuss public business, the discussion will be considered a meeting requiring notice to the public; this is true whether the Council members are in the same room, talking by telephone, or communicating via email or other electronic method~~dia~~.

3.1.1 *Meetings open to the public.* All meetings of the Council, including hybrid and remote meetings, are open to the public except that an executive session may be closed as allowed by law. Each meeting, including an informal Council session held before a

regular business or workshop meeting, will be livestreamed or otherwise made available to the public in real time as circumstances, available technology, and City team resources allow.

3.2 Decorum. The City of Arvada values respectful public discourse and takes reasonable steps to ensure that the public's business at City Council meetings is transacted in a transparent, safe, and efficient manner. No person may engage in an activity that interferes with another person's ability to hear or observe a Council meeting, that disrupts the orderly transaction of the public's business, or that otherwise interrupts the operations of the Council at a meeting. Each speaker must adhere to the time limitations set by these Bylaws or by the presiding officer as appropriate.

3.2.1 *Admission to the dais.* No one except the Council, City team members named in these Bylaws, and individuals invited by the presiding officer may be admitted to the Council dais during a meeting.

3.2.2 *Interference or disruptive conduct.* The presiding officer may direct anyone who interferes with or disrupts the orderly transaction of the public's business or otherwise engages in prohibited conduct or in disorderly conduct that delays or interrupts the operations of the Council at a meeting to cease the violative conduct or to leave the meeting. Any person who fails to immediately comply with the directive may be subject to removal from the meeting, and, where a police officer believes there is probable cause to believe that a statute or ordinance has been violated, may be subject to criminal charges.

3.2.3 *Posting of notice.* The clerk will post a sign about prohibited conduct outside the chamber. Understanding that the City cannot anticipate all conduct that might disrupt the orderly transaction of business at Council meetings, the notice may be general in nature.

3.3 Communication with the Council at meetings. The City encourages the public to communicate with Council members via public comment at a Council meeting in accordance with **Appendix 6**, or during a public hearing on a matter in accordance with **Appendix 7**.

4. AGENDAS; MEETING LOGISTICS

4.1 Agendas.

4.1.1 *Preparation and distribution of.* Each agenda will be prepared by the clerk at the direction of the manager and distributed as set forth in **Appendix 8**.

4.1.2 *Order of business at meetings.* The Council will conduct business at meetings in accordance with **Appendix 9**.

4.1.2.1 Adding or deleting an agenda item during a meeting. A consensus of the Council may direct the manager to add or delete an agenda item during a meeting if the change is consistent with the provisions of the Open Meetings Law.

4.1.2.2 Change to agenda order. Notwithstanding any other provision of these Bylaws, the presiding officer may call individual matters within an agenda

~~category~~ in any order. In addition, the Council, by a majority vote of the members present at a meeting, may change the order of business from that stated in an agenda except that the Council may not conduct a public hearing prior to the time set on the agenda for that hearing.

4.1.3 *Presentation of an agenda item.* Upon calling an agenda item, the presiding officer will ask a City team member for information about the item.

4.2 Recording. Except as otherwise noted herein, and except for an executive session where legal advice is given to the Council, each Council meeting will be recorded electronically. In the event circumstances prevent the electronic recording of an emergency meeting or otherwise make the electronic recording of an emergency meeting impractical, the clerk will draft minutes of the meeting in accordance with section 4.3 below.

4.3 Minutes. The clerk will draft written minutes of each regular business, special, and emergency meeting. The minutes must include each motion and the results of any formal electronic or roll call vote by each member. Minutes of each meeting will be open to the public for inspection. In the case of an emergency meeting, and if the clerk is unavailable, any City team member may record the minutes.

4.3.1 *Presentation of the minutes.* The minutes of each meeting will be delivered to each member as part of the agenda packet for the next regular Council meeting or as soon thereafter as is reasonably practicable.

4.3.2 *Reading is not required.* Minutes will not be read if each member has been given a copy of the minutes in advance of the meeting at which they are to be approved.

4.3.3 *Procedure for approval.* The presiding officer will ask at the beginning of a regular or special meeting if there are any corrections to the minutes for the previous meeting or meetings as published. If no correction is noted, or if a correction is noted and no other member objects to the correction, the minutes will be deemed approved as presented. If there is an objection to a noted correction, City team members may assist in resolving the issue. Following any necessary discussion, the minutes will be approved with or without the noted correction as appropriate and with the general assent of a majority of those members present at the meeting. The minutes will be signed by the presiding officer and the clerk of the meeting for which minutes are approved.

4.4 Postponement or cancellation. If a scheduled meeting falls upon a holiday, the meeting will be automatically canceled without the need for a Council vote. The Council may, by the majority vote of those present, cancel any meeting, except that at least one regular business meeting must be held each month. A regular business meeting postponed and rescheduled to a day other than the first or third Tuesday of the month will be considered a regular business meeting and not a special meeting.

4.4.1 *Extraordinary events.* In the event ~~adverse~~ a technical issue, civil emergency, emergency, disaster, city-wide health concern, adverse -weather conditions, or other circumstances make~~s~~ it imprudent or impossible for Council to meet for a scheduled meeting, the meeting may, by order of the city manager after consultation with the

mayor, be postponed until a quorum of the Council is able to meet or be held as a remote meeting in accordance with BA 2.7. ~~If a technological issue, a civil emergency, emergency, or disaster makes it imprudent or impossible for the Council to meet at a scheduled meeting, the meeting will be postponed by order of the city manager until a quorum of the Council is able to meet.~~

4.5 Roles of City team members. The city manager, city attorney, city clerk, and chief of police or designees thereof are expected to attend each Council meeting and perform duties as set forth in **Appendix 8**. City department and work system directors or other team members may attend Council meetings as deemed necessary or practical by the city manager or the city attorney; they may delegate their meeting responsibilities as appropriate.

Bylaws Appendix 1 - City Council Meetings: Types and Schedule

Type / Purpose of the meeting is to allow the Council to:	Day / Time	References and Notes
Regular business: Take formal action on matters by ordinance, resolution, or motion.	On the 1st and 3rd Tuesday of each month at 6 p.m. local time (including a meeting held on the 5th Tuesday or held on another day in place of a Tuesday meeting cancelled due to a holiday).	See Charter section 5.1. Council must meet no less often than once per month. Public comment is allowed. BA 6.1.1.
Workshop:* Receive information about an issue or topic affecting the City and provide a forum for members to discuss those issues and topics.	On the 2nd and 4th Tuesday of each month at 6:00 p.m. local time.	May be held during a regular business or special meeting if the meeting agenda clearly delineates which portion of the meeting is a workshop. Public comment is allowed in the sole discretion of the presiding officer. BA 6.1.1.
Study session:* Understand policy options related to a particular topic and to ascertain Council's policy direction on that topic.	On Tuesdays at 4:00 p.m. local time but may be held any day of the week as directed by Council.	May be held during a regular business or special meeting if the meeting agenda clearly delineates which portion of the meeting is a study session. Public comment is not allowed. BA 6.1.1.
Special: Transact limited municipal business which cannot otherwise be transacted in a timely manner at a regular meeting.	Held ~~on a day other than a Tuesday at the time~~at a time specified in the special meeting notice. Will be called by the clerk upon receipt of a written request by the mayor, or of any two other members of Council on at least 24 hours written notice. May be held on shorter notice if all members are present or have waived notice in writing.	See Charter sections 5.2 and 5.3. No business may be transacted at a special meeting unless it has been stated in the meeting notice, except business that has already been noticed at a regular meeting may be transacted at a special meeting even if that business is not noticed in the call for the special meeting, if all members present at the meeting consent thereto and all absent members file their written consent. Public comment is allowed on any business item on the agenda. BA 6.2.4.
Emergency: Conduct business that would otherwise occur at a regular business meeting when it would be imprudent to wait for the next such regularly scheduled meeting to occur, or to allow Council to examine a topic related to the declared emergency.	May be held on any day of the week, at any time, and at any location during a civil emergency, emergency, or disaster declared under Chapter 26 of the City Code.	See Charter section 5.9 and A.C.C. Chapter 26. Public comment is allowed in the sole discretion of the presiding officer. BA 6.1.1.
Informal:* Review upcoming agendas and calendars and provide and receive similar logistical or operational information.	On Tuesdays at 5:00 p.m. local time before a regular business or workshop meeting.	Public comment is not allowed. BA 6.1.1.

BA TABLE 1

*No formal vote, decision, or action on a topic may be taken at a workshop, a study session, or an informal meeting.

Bylaws Appendix 2 - Electronic Meetings

BA 2.1 All meetings open. All Council meetings will be open to the public in accordance with section 3.1 of these Bylaws.

BA 2.2 In-person meetings. Council meetings will be primarily conducted in person.

BA 2.3 Electronic meetings generally. A meeting at which some Council members are physically present, but which allows for the electronic participation of other members will be known as a "hybrid" meeting. A meeting at which all members appear telephonically or by video conferencing will be known as a "remote" meeting. Understanding that hybrid and remote meetings are sometimes necessary, City team members will facilitate participation in these meetings.

2.3.1 *Public comment at electronic meetings.* Public comment at an electronic meeting, if otherwise allowed under these Bylaws, will be conducted as set forth in BA 6.

BA 2.4 Requirements for electronic meetings. A hybrid or remote meeting may be held if all the following conditions are met:

BA 2.4.1 *Communications requirements.* All Council members, City team members whose presence is required under these Bylaws or is otherwise necessary, and the public can hear one another clearly, can communicate with one another as allowed under these Bylaws, and can hear all discussion and testimony and read all meeting information in a manner designed to enhance participation;

BA 2.4.2 *Voting requirements.* All votes are conducted by roll call or by display and documented as set forth in these Bylaws; and

BA 2.4.3 *Public comment.* The public may submit written comments or be heard virtually if allowed under these Bylaws and if reasonably practicable considering the reason why the meeting is being held remotely, and subject to reasonable limits imposed by the presiding officer.

BA 2.5 Notice. To the extent practicable, a meeting notice for a meeting that is conducted as a hybrid or remote meeting will advise the public that the meeting is being held in a hybrid or remote format and how to access, observe, and participate in the meeting as appropriate. The notice will also advise that unanticipated technological issues that prevent a meeting from being held in a hybrid format do not constitute grounds for canceling the meeting.

BA 2.6 Electronic participation by a Council member (a "hybrid" meeting). A Council member or members may participate in a meeting by telephone or video conferencing using a platform approved by the City when the member has good cause to be away due to a personal or family emergency, or for another unforeseen reason, and if the conditions set forth in section BA 2.4 above are met. The member participating remotely must be in a location with good connectivity by telephone or internet and that is free from distractions that could disrupt the meeting.

BA 2.6.1 *Video participation preferred.* Video conferencing is the preferred method of electronic participation. If video conferencing is not feasible, a telephone connection is acceptable. If a member is participating by video, their video camera must be on throughout the duration of the meeting.

BA 2.6.2 *Arranging for remote participation.* The clerk will make reasonable efforts to afford a member not physically present at a meeting an opportunity to participate in the meeting electronically as otherwise set forth in these Bylaws. Understanding that remote participation in an in-person meeting requires advanced work by City team members, a member wishing to participate electronically in an in-person meeting must:

BA 2.6.2.1 Notify clerk. Notify the clerk of the member's need to participate remotely no later than 24 hours before the start of the meeting; and

BA 2.6.2.2 Timely initiation. Initiate electronic participation no later than ten~~1~~0 minutes before the scheduled meeting time.

BA 2.6.3 *Connection failure.* The presiding officer may discontinue a member's electronic participation in a meeting if technological issues result in communications from the remote member being unintelligible or unclear to the meeting participants, or where a member's electronic participation results in delays or interferes with the meeting due to repeated loss of connectivity, poor quality of the connection, or similar issues. The presiding officer will state the reason for discontinuing a member's participation and the time the member's participation is discontinued. The member will be listed as "absent" for the rest of the meeting. The member will be re-admitted to the meeting if the technological issues are resolved such that the member's communications are clear to other meeting participants. If a member is re-admitted, the mayor will state the time the member was readmitted to the meeting.

BA 2.7 Remote meeting. The Council may conduct a Council meeting as a remote meeting if the city manager, after~~upon~~ consultation with the mayor, determines that an in-person meeting is imprudent or impossible~~not feasible or prudent~~ due to a ~~city-wide health concern, dangerous weather condition, a technology issue, or other emergency~~ technical issue, civil emergency, emergency, disaster, city-wide health concern, adverse weather conditions, or other circumstances affecting the City and if the conditions set forth in section BA 2.4 above are met.

BA 2.8 Quasi-judicial hearings.

BA 2.8.1 *Hybrid meeting.* As noted in the exception to B 2.6.1, a member who attends a meeting remotely will not be considered present for the purpose of establishing a quorum for a quasi-judicial public hearing held during that meeting. A member may not actively participate in a quasi-judicial public hearing or vote on the outcome of the quasi-judicial public hearing in recognition that electronic participation has limitations, including limitations on the ability to fully evaluate a speaker's non-verbal cues in~~s~~ assessing veracity or credibility, and to observe non-verbal communication including that which occurs in explaining charts and graphs during a speaker's presentation or testimony. A member attending a meeting electronically may listen to and view a quasi-judicial hearing.

BA 2.8.2 *Remote meeting.* If a quasi-judicial hearing is set at a meeting that is held in a remote format, the manager will timely advise the applicant of the circumstances and give the applicant the option of proceeding with a remote public hearing or continuing it to the next available regular or special meeting at which a quorum will be physically present. The applicant's decision will be determinative.

BA 2.8.2.1 Applicant responsibility. The applicant must respond to the manager's request in writing by noon local time on the day of the meeting, or the matter will be continued until the next available regular or special meeting.

BA 2.8.2.2 Written waiver by applicant. Should the applicant choose to move forward with the public hearing, the applicant must waive any legal challenge to the public hearing being conducted remotely in writing by noon local time on the day of the meeting, or the matter will be continued until the next available regular or special meeting.

BA 2.8.2.3 Documents. Deadlines for the submission of documents for meetings that are held remotely will be as set forth in section BA 8.3.4.

BA 2.8.2.4 Public participation. The City will make accommodations for virtual public participation should the applicant opt to move forward with the public hearing. Public comment during a public hearing held during a remote meeting will be conducted in accordance with BA 7.

BA 2.8.2.5 Conduct of hearing. The hearing will otherwise be conducted in accordance with the Bylaws governing electronic meetings and public hearings set forth herein, including that written evidence and public comments will be accepted and made part of the record.

BA 2.9 Effect of electronic participation. Except as otherwise noted herein, a member who participates in a meeting by electronic means consistent with these Bylaws will be considered "present" at the meeting for the purpose of establishing a quorum and is entitled to vote on matters at the meeting. A member who participates in a meeting electronically may participate in a public hearing related to a legislative or an administrative matter.

BA 2.10 Telephonic or electronic participation by a presenter or speaker. Electronic participation in a Council meeting by a presenter or a speaker in a hybrid meeting may be allowed at the sole discretion of the city manager. As noted elsewhere in these Bylaws, members of the public are encouraged to engage with Council members by email, through the City's electronic complaint or engagement system, at City-sponsored open houses or other similar meetings, via social media, by letter, and by telephone.

BA 2.11 Discontinuation of electronic participation in a meeting. The presiding officer may discontinue the participation of a member in a hybrid meeting as set forth in BA 2.6.3. If this results in the loss of a quorum, the meeting will be deemed adjourned. The item under consideration at the time the quorum is lost as well as all other remaining items on the agenda. Such items will be rescheduled for the next available regular or special meeting of the Council. A remote meeting may be discontinued by the presiding officer if technical difficulties make it impossible to continue the meeting. The item under consideration at the time the quorum is lost

as well as all other remaining items on the agenda. Such items will be rescheduled for the next available regular or special meeting of the Council.

Bylaws Appendix 3 - Duties and Privileges of the City Council and Council Members

BA 3.1 Oath of office. The presiding municipal court judge or city clerk will administer the oath of office to all newly elected or re-elected Council members at the first regular meeting after a Council election, and to a newly appointed member as soon as is practicable after a Council vacancy is filled.

BA 3.2 Duties. Each member must fulfill their duties as set forth in the Charter, the City Code, these Bylaws, and applicable policies. Each member will review current agenda items and future agendas and provide feedback to team members as appropriate. Each member must timely complete any administrative duties including but not limited to signing documents as authorized by the Council or as otherwise required to facilitate the flow of work by City team members.

> BA 3.2.1 *Representing Council positions*. Members may express their personal opinions and state how they voted on a matter before the Council. Members should use reasonable care to ensure they accurately represent positions taken by Council as a whole.

BA 3.3 Conduct.

> BA 3.3.1 *Generally.* Members are expected to abide by the City's personnel rules and City policies to the extent they apply to members and to otherwise act in accordance with the City's Code of Ethics.
>
> BA 3.3.2 *Meetings.* Members are encouraged to ask questions about an agenda item well before the meeting to allow team members to research the matter and provide an answer before or during the presentation as appropriate. Members will confine themselves to speaking to the merits of an issue or of the question under debate, and refrain from impugning another's motives.

BA 3.4 Mayor pro tem. The mayor pro tem will be elected at the first regular meeting following each Council election and serve at the pleasure of the Council. The election of the mayor pro tem will be the first order of business after new members of the Council are sworn in.

> BA 3.4.1 *Selection process.* Prior to voting, the mayor will poll members about whether they are willing to serve as the mayor pro tem. The mayor will nominate each member willing to serve as the mayor pro tem. Next, each member will vote for one candidate. The mayor will announce the vote total for each candidate. If one candidate receives the vote of a majority of members present, that candidate will become the mayor pro tem.
>
> BA 3.4.2 *Ties; final selection.* If two or more candidates are tied for the highest vote, the mayor will announce the vote total of all candidates, and the Council will vote until one of the tied candidates receives the vote of a majority of members present. If the tied candidates are not the highest vote getters, and no other candidate has received a majority vote of those present, the mayor will announce the vote totals, and the Council will vote only for the tied candidates to determine which of the tied nominees will remain in the balloting with the top vote getter. Successive votes will be taken until one of the tied candidates receives the vote of a majority of those present to face the top vote getter. The mayor will then call for a vote for one of the two remaining candidates to become the

mayor pro tem. Successive votes will be taken until one of the two candidates receives a majority vote to become the mayor pro tem.

BA 3.4.3 *Mayor pro tem vacancy.* In the event of a vacancy in the position of mayor pro tem, a successor will be elected in the manner set forth herein as soon as is practicable after the vacancy occurs.

BA 3.4.4 *Mayoral vacancy.* In the event of a vacancy in the office of the mayor or the disability of the mayor, the mayor pro tem will perform all the duties of the mayor and have all the powers of the mayor until a new mayor is chosen as set forth in Charter section 4.6. See also Charter section 4.5.

BA 3.5 Attendance required. Among the primary ways City Council members serve the public is by attending all City Council meetings for the entire length of each regular business, workshop, study session, special, and emergency meeting. No Council member may be excused from attendance at a meeting except upon the affirmative vote of the majority of Council members present. No member may leave a meeting while it is in progress except for a personal emergency and with the permission of the presiding officer. If a member leaves without permission, their absence will be deemed unexcused. See Charter section 4.6. In the interests of transparency, and unless directed otherwise by the Council, the city clerk will make available on the City's website no later than January 31 of each year a list of absences (including excused absences) for each Council member for the previous calendar year.

BA 3.5.1 *Seating.* Members will occupy the respective seats in the chamber as assigned by the mayor. However, any two members may exchange seats by joining in a written notice to the mayor.

BA 3.6 Committees, Boards, Councils, and Commissions.

BA 3.6.1 *Appointment of member to Council committees.* In addition to their Council responsibilities representing their constituents through policy-making decisions for the City, the Council may create standing or special Council committees as circumstances require. These committees may be established in consultation with the city manager or city attorney as appropriate to serve a specific purpose or as may be set forth in Council policy and disbanded when the need for the committee no longer exists or as otherwise set forth in Council policy. Membership on a Council committee will be designated by a consensus of the Council. A member may serve on one or more of these committees at a time.

BA 3.6.2 *Appointment of member to regional, state, or national committees.* The Council may appoint a member or members of the Council to a regional, state, or national committee, board, council, or commission as set forth in City Code section 2-78 and City Council Policy 200.2, and in accordance with the policies or rules of that committee, board, council, or commission. A member may be removed from a committee as set forth in City Code section 2-78.

BA 3.6.3 *Appointment of citizens to city committees.* The Council may create boards, commissions, and committees as set forth in section 9.1 of the Charter. The Council will

appoint citizens to and may remove them from City advisory or steering boards, commissions, and committees as set forth in City Code section 2-78 and in City Council Policy 200.1.

Bylaws Appendix 4 - Executive Session Procedures

BA 4.1 Generally. The Council may hold an executive session at any time during any meeting. Each executive session will be held in accordance with the OML.

> BA 4.1.1. *No formal action.* No formal action may be taken on a topic discussed during the executive session. The Council may not adopt a proposed policy, position, resolution, rule, or regulation during an executive session. No formal action by the Council is valid unless Council has complied with the meeting and notice requirements of the OML.

BA 4.2 Notice. Whenever possible, an executive session should be noticed on the Council agenda. The notice should include the topic and the statutory justification for the executive session. Notwithstanding the foregoing, the Council may hold an executive session if a motion to move into an executive session is approved.

BA 4.3 Procedure.

> BA 4.3.1 *Motion; topics allowed.* To hold an executive session, the presiding officer will note the need for an executive session, and with the assistance of the city attorney, if appropriate, announce the topic of discussion at the executive session. A member must make a motion to move into an executive session. Because the topics for executive sessions are limited to those set forth in C.R.S. section 24-6-402(4), the announcement must include the specific citation within that statute allowing for the executive session and must identify the matter to be discussed in as much detail as is reasonably practicable without compromising the purpose for which the executive session is being requested.
>
> BA 4.3.2 *Vote to hold*. The Council must then vote on whether to hold the executive session as described. The motion will be approved upon an affirmative vote of two-thirds of the members present.
>
> BA 4.3.3 *Vote to leave.* A member must make a motion to leave an executive session. The Council must vote on the motion. The motion will be approved upon an affirmative vote of a majority of the members present.

BA 4.4 Hybrid or remote participation. A member participating electronically in an executive session is responsible for providing a secure telephone or electronic connection using a platform approved by the City. The member must ensure that no other person is present with them or has access to the meeting during an executive session.

BA 4.5 Other resources. Team members may create and use any form or other tool to aid in efficiently calling for or holding an executive session.

Bylaws Appendix 5 - Procedures Related to the Approval of Ordinances and Resolutions

BA 5.1 Ordinances generally. Each ordinance must comply with Charter sections 5.7 through 5.9, as applicable, and the following procedure. No ordinance may be placed on a consent agenda.

BA 5.1.1 *First reading*. An ordinance may be introduced on first reading at any regular business or special meeting. If an ordinance has been made available to the Council and the public before its consideration, it will be read by title only; otherwise, it will be read in full. An ordinance may be amended on first reading at the sole discretion of the city manager. If approved on first reading, it will be set for public hearing and published in full. The publication will set forth the date, hour, and place at which the public hearing will be held.

BA 5.1.2 *Second reading and public hearing.* The ordinance will be presented to the Council a second time for final approval at a meeting held not earlier than seven days after publication for the final passage, rejection, postponement, or to table the ordinance, or for other action. This meeting will be the same meeting at which the public hearing on the ordinance is held. The ordinance will be presented by a member at the second reading and public hearing by reading the title only and then opened to public hearing. An ordinance may be amended at any time before final passage upon Council's vote.

BA 5.1.3 *Publication.* An ordinance may be published by title or in full, unless it has been amended, in which case it must be published in full after final passage.

BA 5.2 Amendment to an existing ordinance. An ordinance that amends an existing ordinance will be titled as such and must be accompanied by an exhibit outlining any redlined and strikethrough notations; however, if the amendment is a repeal and reenactment of an existing ordinance and publishing a redlined and strikethrough version would not enhance understanding of the changes made to the original ordinance, then the amendment is not required to be accompanied by a redlined and strikethrough document.~~.~~

BA 5.3 Codes adopted by reference. The publication of a code adopted by reference must contain a summary of the subject matter of the code and a notice that copies of the code being adopted by reference are available at the ~~office of the~~ city clerk's office. See Charter section 5.8.

BA 5.4 Emergency ordinances. The adoption of an emergency ordinance must comply with all requirements set forth in Charter section 5.9. An emergency ordinance will take effect upon passage. Publication will be within ten days, or as soon thereafter as possible. If an emergency ordinance fails to receive the required number of votes, it will have the same standing it would have had if it had not been introduced as an emergency measure.

BA 5.5 Resolutions generally; intergovernmental agreements (IGAs). Resolutions must be made in written form. Public comment is allowed for resolutions under BA 6.2.1. An IGA will be adopted by resolution in accordance with Council policy. If the Council approves an IGA, the city manager may take whatever administrative action is necessary to implement it.

BA 5.6 Failure to act. Except for matters that have been continued or rescheduled under section 2.11, failure by the Council to act on an ordinance upon first or second reading or on a resolution upon its reading means the matter has failed.

Bylaws Appendix 6 - Public Comment at Meetings

BA 6.1 Generally. The City provides the public with many opportunities to contact Council members about matters of public importance, including but not limited to by email, through the City's electronic complaint or engagement system, at City-sponsored open houses or other similar meetings, via social media, by letter, by telephone, and by comment at a Council meeting on an issue not on a meeting agenda in accordance with this **Appendix 6**. The City also values the transaction of City business in ways that are responsible and efficient. It endeavors to be respectful of and fair to those who must be present for business scheduled on the agenda. A public comment period at a Council meeting is a limited public forum. These Bylaws balance the interests of individuals who wish to speak at Council meetings with the public's interest in ensuring that City business is conducted timely and efficiently.

BA 6.1.1 *When allowed.* Public comment is allowed at regular business and special meetings. Public comment is allowed at workshops and emergency meetings at the sole discretion of the presiding officer. If allowed, it will proceed in generally the same manner as set forth herein, except that there will be only one public comment period at these meetings. Public comment is not allowed at study sessions or at informal meetings of the Council. Only those Council members, City team members, and other speakers recognized by the presiding officer are permitted to address the Council at a meeting.

BA 6.1.2 *Comment at public hearings.* Public comment on a matter for which a public hearing is held will proceed in accordance with **Appendix 7**.

BA 6.2 Procedure. The Council provides two separate times for public comment during regular business meetings. The total time for each public comment period will not be time-limited~~Neither public comment period will be time-limited~~; however, each speaker's individual time to speak within the public comment period is subject to the limitations set forth below. A speaker may comment on any issue that is not the topic of a public hearing.

BA 6.2.1 *First public comment period.* The first public comment period will occur near the beginning of the agenda. ~~A speaker may comment on an issue that is not the topic of a public hearing. A speaker may also comment about a resolution including those on the consent agenda and about any presentation on the agenda.~~ Each speaker at the first public comment period will be limited to no more than three minutes to express their views. ~~Once one-half hour has elapsed or the tenth speaker has finished, whichever occurs first, the first public comment will end; the next speaker or speakers will be asked to speak first at the second public comment period.~~

BA 6.2.2 *Second public comment period.* The second public comment period will occur near the end of the agenda. Each speaker at the second public comment period will be limited to no more than five minutes to express their views ~~If fewer than ten people have signed up to speak at the second public comment period, each speaker will be limited to no more than five minutes to express their views. If ten or more people have signed up to speak at the second public comment period, each speaker will be limited to no more than three minutes to express their views. The second public comment period is not time-limited, except that because a Council meeting may not extend past 11:30 p.m. local time in accordance with section 2.11.1 of these Bylaws, the presiding officer may end the~~

~~second public comment period shortly before 11:30 to allow the meeting to be adjourned by 11:30.~~

BA 6.2.3 *Limitations on time.* The presiding officer, with the consensus of the Council, may limit the time of each speaker at the beginning of either the first or second regular public comment period beyond what is provided herein. However, all speakers during that public comment period must be subject to the same time limitation.

BA 6.2.4 *Special meetings.* Due to the limited nature of city business conducted at a special meeting and understanding that the agenda for the meeting is set by the city manager in accordance with BA 9.3, the presiding officer will call for public comment on any business item on the agenda in accordance with the procedure set forth below. No other public comment periods may occur at a special meeting.

BA 6.3 Procedure.

BA 6.3.1 *Speaker's form.* To ensure those wishing to speak at a Council meeting are properly recognized by the presiding officer, each person wishing to address the Council during public comment will be asked to complete a speaker's form that lists their name, address, and any other information deemed relevant by the clerk. The clerk will compile a list of those wishing to speak and provide the list to the presiding officer before each public comment period. Due to potential cybersecurity risks, the clerk may not accept for use at public comment a flash drive or other similar data storage device used to transfer electronic data.

BA 6.3.2 *Order of speakers*. The presiding officer will declare the public comment portion of the meeting to be open and then call each speaker to the podium in the order they signed up to speak, except that the presiding officer may give priority to a speaker who is a resident of Arvada during any public comment period. The presiding officer will ask the speaker to state their name and their address, neighborhood, subdivision, or Council district.

BA 6.3.3 *Facilitation of public comment.* The presiding officer is authorized to facilitate the orderly flow of speakers at public comment. To reduce the potential for noise or sound interference, only one person at a time may be present at the microphone during public comment, except for those needing interpretive assistance or those with a disability requiring the assistance of a third party, or unless, in the sole discretion of the presiding officer, more than one speaker should be allowed at the podium during public comment. Once a speaker has been recognized by the presiding officer, any speech, sound, or expressive activity made or generated by the speaker will be considered part of that speaker's allotted time for timer purposes. City team members will silence the microphone of any speaker who exceeds their allotted time as shown on the Council chamber's timer system.

BA 6.3.4 *Speaking at both public comment periods.* A person who speaks during the first public comment period may also sign up to speak during the second public comment period and may speak about the same or different topics during the second public comment period. However, to ensure that as many different speakers as possible

are heard, a person who spoke at the first public comment period will be recognized by the presiding officer at the second public comment period only after the speakers who signed up to speak at only the second public comment period have been heard.

BA 6.4 Virtual comments. Because members of the public have multiple opportunities to engage with Council members on issues of public importance, virtual public comments are not allowed except at a meeting that is held in a completely remote format, and then only in accordance with these Bylaws.

Bylaws Appendix 7 - Public Hearings

BA 7.1 Purpose. A public hearing provides an opportunity for a person to be heard on a specific agenda item requiring a public hearing. A public hearing may relate to a legislative matter (e.g., an ordinance impacting everyone in the City), be quasi-judicial in nature (e.g., held on a zoning or land use issue), or be administrative in nature.

BA 7.2 Time. No public hearing may be set before 6:00 p.m. local time.

BA 7.3 Procedure. Matters relating to the speaker's form, the order of speakers, and the facilitation of public comment will be handled in accordance with BA 6.3 ~~above~~, except that in the case of a public hearing, each speaker must indicate which side of the issue they wish to speak upon. With the consensus of the Council, the presiding officer may limit the time of each speaker at a public hearing as set forth in BA 6.2.3 ~~above~~, and, if each speaker's time is limited, may also limit the time allotted to a spokesperson speaking under a pooling agreement as noted in BA 7.6 below.

> BA 7.3.1 *Comments made available.* The clerk will make available to members before the public hearing all written comments relating to that hearing that were received by the c~~C~~lerk by noon on the day of the hearing.

BA 7.4 Quasi-judicial matter – even number of members present. If an even number of Council members are present at a meeting during which a quasi-judicial hearing is scheduled, and if an applicant for the matter at issue is present, the manager will timely advise the applicant of the circumstances and give the applicant the option of proceeding with the hearing or continuing it to the next available regular or special meeting at which all members will be present. The applicant's decision will be determinative. If the applicant is not present, the members present will decide by consensus whether to proceed on the item. The clerk will record the consensus of Council on this question.

BA 7.5 Order of business—quasi-judicial public hearing. The presiding officer will announce the agenda item, declare the public hearing open, and conduct the hearing as follows:

> BA 7.5.1 Call upon a City team member to briefly describe or present the item under consideration. A team member will review the item and enter any exhibits (e.g., staff report, maps, mailing affidavit, posting log, etc.) into the record.

> BA 7.5.2 ~~Announce that both sides of the item will be given equal time to present their views. As an example, the applicant, representative of the applicant, and or members of the public who are proponents of the itemproponent, if applicable, will be given the same amount of time to speak to the Council as those who oppose the itemgiven up to one hour to present their views on the item before the Council, and that those giving testimony on other side of the issues will then be given one hour to present their views~~. Each member of the public who gives testimony during the public comment portion of the public hearing will be limited to no more than three minutes to express their views on the item before the Council. All those giving testimony should direct their comments to the Council. The applicant or their representative~~proponent of the item~~ will be allotted ~~a few~~ extra time~~minutes~~ following public comment for rebuttal.

~~Exception: The presiding officer, with the consensus of the Council, may determine that more or less overall time per side is reasonable. If more or less time is deemed reasonable, the total time allotted to the proponent of the item and to those giving testimony about the item will be as equal as is practicable.~~

BA 7.5.3 Ask all speakers to attest or swear by oath that all statements and evidence they present will be the truth.

BA 7.5.4 Call the applicant or proponent to the podium, if appropriate. Invite the applicant to present information or comments about the matter.

BA 7.5.5 Open the public comment portion of the hearing. If one or more members of the public have signed up to speak at the hearing, call them to the podium in order that they signed up to speak, except that the presiding officer may give priority to a speaker who is a resident of Arvada. The presiding officer will ask the speaker to state their name and address or the nearest cross streets, neighborhood, subdivision, or Council district.

BA 7.5.6 ~~Ensure that all questions, including those from Council members and team members, are directed to the presiding officer. Members may question the applicant, representatives of the applicant, or members of the public during the public comment portion of a quasi-judicial public hearing. In each case, the presiding officer will acknowledge the Council member and allow the Council member to ask the question. Members will refrain from asking a question that is irrelevant, redundant, or is primarily designed to embarrass an individual. The response to a question will be limited to answering the question as stated.~~

~~BA 7.5.7~~ Declare the public comment portion of the hearing to be closed.

BA 7.5.7~~8~~ Call for questions from or discussion by the Council. A member~~Members~~ may question an applicant, a representative of an applicant, a person who has spoken during the public comment portion of the hearing, or a City ~~only~~ team member~~s~~ during this stage of the hearing. Should a member wish to ask a question, the presiding officer will acknowledge the Council member and allow the member to ask the question. Members will refrain from asking a question that is irrelevant, redundant, or is primarily designed to embarrass an individual. A response to a question will be limited to answering the question as stated. Once all Council members have discussed the matter, the presiding officer will declare the public hearing to be closed.

BA 7.5.8~~9~~ Call for a motion, if any, call for a vote on the motion, and close the matter once the vote is recorded.

BA 7.6 Pooling agreements. In-person speakers may "pool" time during the public comment portion of a public hearing. To pool time during a public hearing, a spokesperson must present to the clerk by noon the day of the meeting the names of at least three other individuals who wish to yield their three minutes to the spokesperson. At the time the spokesperson is called to the podium during the public comment portion of the public hearing, the clerk will confirm that at least three of the individuals who have yielded time to the spokesperson are present in the chamber. If fewer than three individuals who have yielded time to the spokesperson are present, the pooling agreement will be considered void, and the spokesperson will be limited to three

minutes. In this case, other speakers whose names were presented to the clerk as part of the pooling agreement and who are present may each speak for up to three minutes during the public comment portion of the public hearing. Pooled time will not be yielded to a spokesperson on a minute-by-minute basis; instead, a spokesperson may speak for no more than ten minutes. ~~The time utilized by the spokesperson will count toward the total time allotted to one side or the other as appropriate.~~

BA 7.7 Order of business – other public hearings. The procedure and order of business for other public hearings will be generally the same as that for quasi-judicial hearings, except that after the item is presented by a team member, the presiding officer will call for public comment, ~~and~~ except that there is no need to have public comment speakers attest or swear by oath that all statements they present will be the truth if they are merely providing their opinions about the issue before the Council. Speakers at other than quasi-judicial public hearings may participate in pooling agreements as set forth in this Appendix 7. The presiding officer may set a reasonable time limit for each speaker; the same time limit will apply to all speakers during that public hearing, except that spokespersons for "pooled" comments will be allowed more time as set forth in BA 7.6 above.

Bylaws Appendix 8 - Roles of City Team Members

BA 8.1 The city manager. The city manager will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, in Council policies, and as otherwise required by statute or by contract. The manager will attend all Council meetings and may take part in discussions of all matters concerning the welfare of the City.

BA 8.1.1 *Agenda duties.* Except as otherwise set forth herein, the manager will set the agenda for all Council meetings and determine which matters are to be included on the consent agenda in consultation with the Council. The manager will ensure that each agenda item is accompanied by information including but not limited to background or contextual information, information about the substance of the item, the financial impact of the item, if applicable, and the department or work system requesting consideration of the item.

BA 8.1.2 *Presentations.* The manager may direct the clerk to schedule a presentation on a matter of significant interest at a regular business or special meeting. A presentation must be placed on the agenda no later than noon on Thursday before the meeting or the matter will be placed on the agenda for the next regular business or special meeting.

BA 8.2 The city attorney. The city attorney will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, in Council policies, and as otherwise required by statute or by contract. The city attorney will attend all Council meetings and may take part in discussions of all legal matters concerning the welfare of the City.

BA 8.2.1 *Agenda duties.* The city attorney must approve each resolution and ordinance as to form and in writing. No ordinance providing for an appropriation of money may be approved unless the accompanying information notes the appropriation and the fund to which it is to be charged, and unless the item has been approved by the finance director.

BA 8.3 The city clerk. The clerk will perform the duties set forth in the Charter, the City Code, City policies, these Bylaws, Council policies, and otherwise as required. The clerk will maintain these Bylaws and Council policies, serve as the clerk for Council meetings, and perform all duties attendant thereto, including but not limited to recording the roll, scheduling meetings and unfinished business, recommending the setting of public hearings, keeping meeting minutes, and performing other meeting duties as directed by the presiding officer, the Council, or the manager.

BA 8.3.1 *Agenda preparation.* The clerk will prepare each meeting agenda at the direction of the manager. The clerk will work with the manager and the city attorney to schedule public hearings and executive sessions. The clerk will ensure that each agenda item submitted is in an acceptable format and is accompanied by the relevant ordinances, resolutions, or motions. The clerk may reject an item that is not timely submitted or does not satisfy the City's formatting or accessibility requirements.

BA 8.3.2 *Agenda items*. The clerk will assign each item a number and a descriptive title. Each bill number assigned to an ordinance will follow that ordinance until final passage at which time the proper number for recording shall be assigned. The clerk will complete

all other administrative tasks related to the placement of items on the agenda to ensure the proper recording and tracking of each item.

BA 8.3.3 *Distribution.* The clerk will deliver the agenda packet to each member at least one week before the meeting. The clerk may revise the agenda at the direction of the manager before 5:00 p.m. local time on the Friday before the meeting. The clerk will deliver the final packet to each member on the Friday before the meeting, except that an agenda for an emergency meeting may be revised at any time and provided to members by whatever means are reasonably available and as early as circumstances reasonably allow, given the nature of the emergency. The final agenda, including revisions, will be made available to the public in accordance with the OML. Each packet will set forth each agenda item by number and descriptive title and contain all documents deemed relevant as determined by the manager and city attorney. Packets will be delivered electronically unless a member requests a hard copy. A change to an agenda made at or after 5:00 p.m. local time on the Friday before the meeting will be addressed by Council during the Council meeting.

BA 8.3.4 *Requirements for visual materials*. The clerk may promulgate reasonable policies and rules for the presentation of visual materials at Council meetings and will make those policies and rules known to those authorized to make a presentation at a meeting. Individuals, not including those on the City team, ~~Those~~ wishing to submit a slide presentation, video or still images, audio recordings, or other similar presentation materials must submit the materials to the city clerk no later than noon on Thursday before the meeting at which the presentation is to be made. The clerk, working in conjunction with KATV Channel 8 team members, will ensure that the materials are of a technical quality appropriate for or compatible with the projection equipment used for the Council chamber, and return materials that are not appropriate or compatible. Nothing in this section authorizes a member of the public to use the City's video projection equipment during public comment.

BA 8.3.5 *Timer system.* The clerk will provide and provide for the operation of a timer system to monitor each speaker's time during public comment and to track the total time used by the proponents and opponents of an agenda item or matter under consideration at a public hearing. The timer system will not apply to Council members or city team members.

BA 8.3.6 *Video recordings*. The clerk will make video recordings of Council meetings available for viewing by the public.

BA 8.3.7 *Use of the chamber.* The city clerk will manage the chamber when the Council is not in session. The chamber is open to members of the public only when the Council is in session, and then only for limited purposes and in accordance with the rules set forth in these Bylaws. When the Council is not in session, the chamber may only be used by city team members, by the Municipal Court subject to Court rules, and by elected officials from other governmental entities with the prior approval of the clerk.

BA 8.4 The chief of police. The chief of police or designees thereof will act as the sergeant-at-arms during meetings to assist with the orderly progress of the public's business and may take

any reasonable action to help ensure decorum at meetings and may enforce laws to ensure the safety of those in attendance.

Bylaws Appendix 9 – Order of Business at Council Meetings

BA 9.1 Regular business meeting agenda, generally.

1. CALL THE MEETING TO ORDER
2. MOMENT OF REFLECTION AND PLEDGE OF ALLEGIANCE
3. ROLL CALL OF COUNCIL MEMBERS
4. APPROVAL OF MINUTES
5. PROCLAMATIONS AND COMMUNICATIONS
6. PRESENTATIONS (if any)
7. FIRST PUBLIC COMMENT PERIOD (on issues that are not the topic of a public hearing, on resolutions, and on presentations) (limited to no more than 3 minutes per speaker, and the total length of this public comment period is limited to 1/2 hour or when the tenth speaker has finished, whichever occurs first)
8. NEW BUSINESS
   A. CONSENT AGENDA
   B. RESOLUTIONS
   C. ORDINANCES (first reading of each ordinance)
9. OTHER
10. PUBLIC HEARINGS (second reading and public hearing on each ordinance)
11. SECOND PUBLIC COMMENT PERIOD (limited to no more than 5 minutes per speaker)
13. REPORTS FROM THE CITY COUNCIL
    A. Council committee reports
14. REPORTS FROM THE CITY MANAGER
15. REPORTS FROM THE CITY ATTORNEY
16. ADJOURNMENT

BA 9.1.1 Unfinished business. Unfinished business from a regular business meeting or a special meeting may be set on the agenda of a subsequent regular business meeting unless minutes from a previous meeting must be approved first.

BA 9.2 Workshop or study session meeting agenda, generally.

1. CALL TO ORDER
2. ROLL CALL OF COUNCIL MEMBERS
3. WORKSHOP / STUDY SESSION TOPICS
4. ADJOURNMENT

BA 9.3 Special meeting agenda. Because of the limited nature of city business transacted at a special meeting, the agenda for a special meeting differs from that used for a regularly scheduled business meeting. The agenda will be set by the city manager in consultation with the Mayor and the Council and noticed as set forth in the Bylaws.

BA 9.4 Emergency meeting agenda. The agenda for an emergency meeting will be set by the manager in consultation with the Mayor and the Council to the extent practicable given the nature of the emergency.

BA 9.5 Changes to an agenda. The City Council may add or delete an agenda item or otherwise change an agenda in accordance with subsections 2.7.4 and 4.14. ~~1.2.1 and 4.1.2.2~~ of these Bylaws.

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 8.C.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Ordinances (First Reading)

Report in Brief

MOTION FOR FIRST READING ORDINANCES:

I move that CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado, a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72 be (approved on first reading, ordered published in full, and a public hearing set for June 16, 2026 at 6:15 p.m.) (rejected).

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report

CITY OF ARVADA

REPORT TO CITY COUNCIL ORDINANCE FIRST READING

AGENDA ITEM 8.C.1.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado, a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72 (Public Hearing to be set for June 16, 2026 at 6:15 P.M.)

Report in Brief

The applicant requests to rezone Lots 1, 2, 3, and 4, Block 1, of Candelas 93-72 South Filing No. 1 from Planned Unit Development (PUD-BP) to Commercial, General (CG). The site is located at 9275, 9284, 9295, Matterhorn Lane, 20924 W 92nd Lane, and 20009 Highway 72. The applicant proposes a convenience store and fuel station on Lot 1. Lots 2, 3, and 4 will not be developed at this time. A rezoning to Commercial, General (CG) for all Lots, a Concept Plan, and a Major Modification to allow ten fuel islands (pumps) in lieu of the five otherwise allowed for the Lot 1 development are being requested.

The Arvada Team recommends that the City Council approve CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72.

Financial Impact

There is no Financial Impact to the City.

Background

The applicant requests to rezone Lots 1, 2, 3, and 4, Block 1, of Candelas 93-72 South Filing No. 1 from Planned Unit Development (PUD-BP) to Commercial, General (CG). The site is located at 9275, 9284, 9295, Matterhorn Lane, 20924 W 92nd Lane, and 20009 Highway 72.

The applicant proposes a convenience store and fuel station on Lot 1. Lots 2, 3, and 4 will not be developed at this time. A rezoning to Commercial, General (CG) for all Lots, a Concept Plan, and a Major Modification to allow ten fuel islands (pumps) in lieu of the five otherwise allowed for the Lot 1 development are being requested.

The site is located at the southeast corner of the intersection of Highway 72 and Highway 93. To the southeast of the site is the Luxelocker site. The site is currently vacant, however, overlot grading and internal streets have been constructed. The property is zoned Planned Unit Development (PUD-BP) under the Candelas Outline Development Plan Amendment 6 and has a Neighborhood/Community Commercial Land Use designation which allows for business and professional development uses. Under the current zoning, all four lots have a maximum building height of 85 feet, a maximum Floor Area Ratio (FAR) of 3.00 (a ratio of three to one), and a minimum Floor Area Ratio of .18 to 1. Residential uses are not permitted.

The rezoning concept plan proposes commercial zoning and associated uses. The City is moving toward standard zoning districts and because the project could be developed under a standard LDC zone district rezoning the properties to the CG zoning district is appropriate.

Discussion

Div. 8-3-4 Zoning and Rezoning Approval Criteria	Finding	Rationale
1. The rezoning is consistent with the Arvada Comprehensive Plan, or an adopted sub-area plan, corridor plan, or urban renewal plan, or reflects conditions that have changed since the adoption of the Comprehensive Plan.	Complies	The rezoning to CG is consistent with the Comprehensive Plan designation of Neighborhood/Community Commercial on the Future Land Use map.
2. The intended land use is consistent with the stated intent of the proposed zoning district.	Complies	The intended land use is consistent with the intent of the CG zone district to accommodate a wide variety of general retail and service uses, as well as professional and business offices serving both neighborhood and area-wide needs.
3. Facilities and services (including sewage and waste disposal, water, gas, electricity, police and fire protection, and roads and transportation, as applicable) will, prior to development, be available to serve the subject property while maintaining adequate levels of service to existing development.	Complies	All public facilities and services are available to service to the site. Additional infrastructure necessary to service the site will be constructed after approval of the Site Plan and Minor Subdivision. Water allocation will be deducted from the remaining JCMD Commercial Water Allocations.
4. The intended land use for which the rezoning is sought will not result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated.	Complies	The intended land use will not result in significant adverse impacts.
5. The rezoning is consistent with the character of existing or planned development on adjacent properties and in the surrounding area or neighborhood, or measures will be taken to substantially buffer or otherwise substantially mitigate any negative impacts.	Complies	The rezoning is consistent with the character of existing development and the future commercial development to the west and north. It enforces the goals and policies of the Comprehensive Plan to serve the surrounding residential communities.

Public Contact

Division 8-2-2 of the Land Development Code requires that at least one neighborhood meeting be held for projects that require public hearings before the Planning Commission and City Council.

The neighborhood meetings for this project took place on October 2, 2025. The applicant and CED staff were in attendance. No

members from the general public attended the meeting. An informal discussion of the project with follow-up questions and answers was held among the project team. The discussion centered around the Concept Plan, building elevations, the QuikTrip business in general and how they are expanding in the Market. City entitlement procedures and processes were also discussed. The applicant prepared a summary of the meeting, which is attached.

Written notice was sent 15 days prior to the meeting, a published notice was posted in the newspaper 15 days prior to the meeting, and a public hearing sign was posted 15 days prior to the meeting.

Commission Recommendation

On April 1, 2026, the Planning Commission voted 7 to 0 to recommend approval to the City Council.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system. The project fulfills CED3 and supports the community's vision by cultivating an environment that attracts and retains private-sector investment, a talented workforce, and an engaged business community.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council Approve QuikTrip 4234 Rezoning.

Suggested Motion:

I move that CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72 be (approved on first reading, ordered published in full and a Public Hearing to be set for June 16, 2026, at 6:15 P.M.) (rejected).

Prepared by:
Heidi Van Gieson, Administrative Specialist

Reviewed by:

Approved by:

Julia Duncan, Senior Planner	04/08/2026
Josie Suk, Development Systems and Administrative Manager	04/10/2026
Rob Smetana, Planning Manager	04/10/2026
Jessica Garner, Director of Community and Economic Development	04/10/2026
Gail Walker, Legal Specialist-Contracts	04/10/2026

SUBJECT: CB26-017, An Ordinance Rezoning Certain Land Within the City of Arvada, Lots 1, 2, 3, & 4, Block 1, of Candelas 93-72 South Filing No. 1 from City of Arvada PUD-BP (Planned Unit Development) to City of Arvada CG (Commercial, General), and Amending the Official Zoning Maps of the City of Arvada, Colorado, a parcel of land Generally located at the Southeast Corner of SH-93 and SH-72 (Public Hearing to be set for June 16, 2026 at 6:15 P.M.)	**PAGE:** 4 **ITEM:** 8.C.1.

Kelsy Sargent, Assistant City Attorney	04/10/2026
Rachel Morris, City Attorney	04/18/2026
Allison Scheck, Deputy City Manager	04/18/2026
Don Wick, City Manager	04/18/2026

Enclosure, exhibits & attachments required to support the report

COUNCIL BILL NO. 26-017
ORDINANCE NO.

AN ORDINANCE REZONING CERTAIN LAND WITHIN THE CITY OF ARVADA, LOTS 1, 2, 3, & 4, BLOCK 1, OF CANDELAS 93-72 SOUTH FILING NO. 1 FROM CITY OF ARVADA PUD-BP (PLANNED UNIT DEVELOPMENT) TO CITY OF ARVADA CG (COMMERCIAL, GENERAL), AND AMENDING THE OFFICIAL ZONING MAPS OF THE CITY OF ARVADA, COLORADO, A PARCEL OF LAND GENERALLY LOCATED AT THE SOUTHEAST CORNER OF SH-93 AND SH-72

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The following described property is hereby rezoned from City of Arvada PUD (Planned Unit Development) to City of Arvada Commercial General (CG).

LOT 1
LOT 1A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 2
LOT 2A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 3
LOT 3A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 4
LOT 4A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

Section 2. The Official Zoning Maps of the City of Arvada are hereby amended in accordance herewith.

Section 3. This ordinance shall be effective fifteen days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 5th day of May, 2026.

PASSED, ADOPTED, AND APPROVED this _____day of _____, 2026.

_____
Lauren Simpson, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

Publication Dates: May 7, 2026

LEGAL DESCRIPTIONS

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF ARVADA, IN THE COUNTY OF JEFFERSON, STATE OF COLORADO, AND IS DESCRIBED AS FOLLOW:

LOT 1

LOT 1A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 2

LOT 2A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 3

LOT 3A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

LOT 4

LOT 4A, BLOCK 1A, CANDELAS 93-72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.

PROJECT VICINITY MAP



City of Arvada
Community and Economic Development Department
PUBLIC HEARING STAFF REPORT

QuikTrip Rezoning
Rezoning & Major Modification
DA2025-0075

NATURE OF REQUEST

The applicant requests to rezone Lots 1, 2, 3, and 4, Block 1, of Candelas 93-72 South Filing No. 1 from Planned Unit Development (PUD-BP) to Commercial, General (CG). The site is located at 9275, 9284, 9295, Matterhorn Lane, 20924 W 92nd Lane, and 20009 Highway 72.

The applicant proposes a convenience store and fuel station on Lot 1. Lots 2, 3, and 4 will not be developed at this time. A rezoning to Commercial, General (CG) for all Lots, a Concept Plan, and a Major Modification to allow ten fuel islands (pumps) in lieu of the five otherwise allowed for the Lot 1 development are being requested.

LOCATION AND HISTORY

The site is located at the southeast corner of the intersection of Highway 72 and Highway 93. To the southeast of the site is the Luxelocker site. The site is currently vacant, however, overlot grading and internal streets have been constructed. The property is zoned Planned Unit Development (PUD-BP) under the Candelas Outline Development Plan Amendment 6 and has a Neighborhood/Community Commercial Land Use designation which allows for business and professional development uses. Under the current zoning, all four lots have a maximum building height of 85 feet, a maximum Floor Area Ratio (FAR) of 3.00 (a ratio of three to one), and a minimum Floor Area Ratio of .18 to 1. Residential uses are not permitted.

The rezoning concept plan proposes commercial zoning and associated uses. The City is moving toward standard zoning districts and because the project could be developed under a standard LDC zone district rezoning the properties to the CG zoning district is appropriate.

MINOR & MAJOR MODIFICATIONS REQUESTED

The Applicant is requesting a Major Modification from development standards in the Land Development Code Section 3-1-3-8 Motor Vehicle Use Standards. Fueling/Service Station use specific standards limit the number of service bays and pump islands. A service station or convenience store with fuel sales may have a maximum of two service bays and two pump islands on a 12,000 square foot lot. One service bay or one pump island may be added for each additional 2,000 square feet of lot area, provided that the total number of service bays shall not exceed five per lot and the number of pump islands shall not exceed five per lot. The fuel station and convenience store is proposed for Lot 1 and is approximately 3.023 acres. The

development would be allowed the maximum allowable five pump islands. The applicant is requesting ten pump islands.

Staff support this modification request with conditions of approval based on the findings outlined in the Project Analysis sections below.

Vicinity Map



NEIGHBORHOOD MEETING

Division 8-2-2 of the Land Development Code requires that at least one neighborhood meeting be held for projects that require public hearings before the Planning Commission and City Council.

The neighborhood meetings for this project took place on October 2, 2025. The applicant and CED staff were in attendance. No members from the general public attended the meeting. An informal discussion of the project with follow-up questions and answers was held among the project team. The discussion centered around the Concept Plan, building elevations, the QuikTrip business in general and how they are expanding in the Market. City entitlement

procedures and processes were also discussed. The applicant prepared a summary of the meeting, which is attached.

PUBLIC NOTIFICATION

Division 8-2-4 of the Land Development Code requires public notification for all public hearings as follows:

Written Notice: At least 15 days prior to all public hearings, written notice must be mailed to all property owners within 1,500 feet of the subject property and to all homeowners' associations and neighborhood associations with a known interest in the subject property. The applicant will provide an affidavit of mailing verifying this requirement has been met prior to the public hearing.

Posted Notice: At least 15 days prior to all public hearings, signs notifying the public of the hearing must be posted on the subject property. The applicant will provide a posting log verifying that this requirement has been met prior to the public hearing.

Published Notice: At least 15 days prior to all public hearings, notice of the hearing must be published in a newspaper of general circulation in the City. The required notice has been published.

SEVERED MINERAL RIGHTS

At least 30 days prior to the public hearing, written notice of the application must be mailed to any owner of mineral rights associated with the subject property. The Mineral Rights have not been severed and the applicant provided documentation the owner waived the 30-day notification requirement.

DEVELOPMENT REVIEW TIMELINE

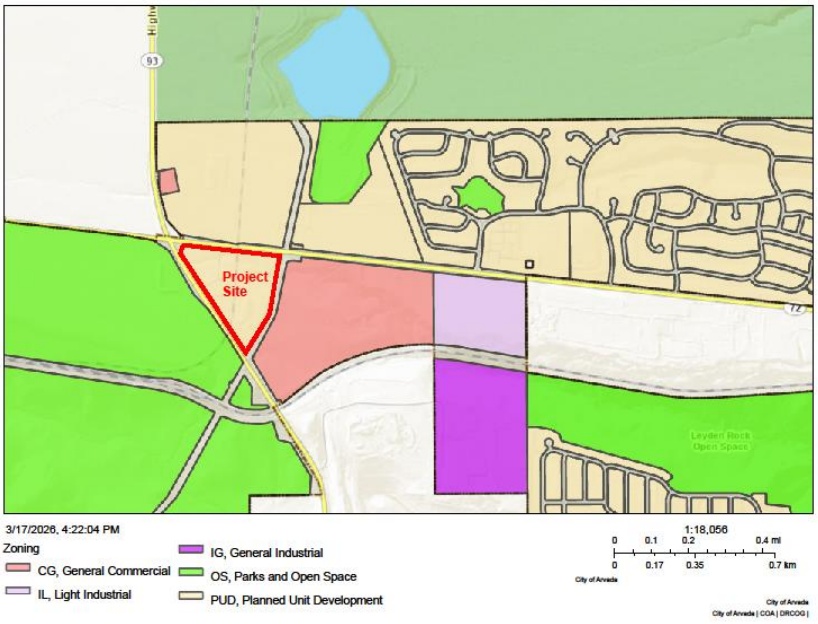
Review of the application began on November 7, 2025. Two reviews were required prior to proceeding with public hearings.

ALIGNMENT WITH CITY COUNCIL STRATEGIC PLAN

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system. The project fulfills CED3 and supports the community's vision by cultivating an environment that attracts and retains private-sector investment, a talented workforce, and an engaged business community.

ZONING AND LAND USE

Zoning Map



The subject property is called Parcel 1-3 under the Candelas Outline Development Plan Amendment 6. All four lots within Parcel 1-3 are currently zoned PUD-BP (Planned Unit Development- Business, Professional). The four lots total approximately 9.47 acres. The existing PUD-BP allows for business and professional development. Under the current zone, the properties have a maximum building height of 85 feet, a maximum Floor Area Ratio (FAR) of 3.00 to 1 (a ratio of three to one), and a minimum Floor Area Ratio of .25 to 1. Uses allowed include the following: agriculture, community; greenhouses; live-work; assisted living; nursing homes; farmer's markets; financial institutions; general or professional office; medical office/dental clinic; personal services; recording studio/TV studio; fast food restaurant; fast food with drive-thru restaurant; retail, convenience store (gas); retail, regional shopping center; retail, 25,000 square feet or more; retail, veterinary clinics; outdoor recreation; and a number of community, educational, and institutional uses. Light industrial uses are also permitted.

Surrounding properties are zoned and utilized as follows:

Direction	Zoning	Actual Use
North	PUD: Candelas Parcels 1-2, 1-5, and 1-6	Currently vacant and scheduled for Public Hearing for a Comprehensive Plan Amendment and Rezoning.
South	Open Space (OS)	Undeveloped
East	PUD	Future Luxelocker Development
West	ROW SH-93 and Open Space (OS)	State Highway 93/Undeveloped

The applicant is requesting approval to rezone Lots 1, 2, 3, and 4, Block 1, of Candelas 93-72 South Filing No. 1 from Planned Unit Development (PUD-BP) to Commercial, General (CG). Because the project could be developed under standard LDC zoning districts, the City encourages rezoning to standard zones. For the project site, the CG (General Commercial) zone district is appropriate. The CG zone maintains the commercial component at the southeast intersection of Highway 93 and Highway 72 which is aligned and consistent with the original zoning and complements the commercial being maintained on the northeast corner of the intersection.

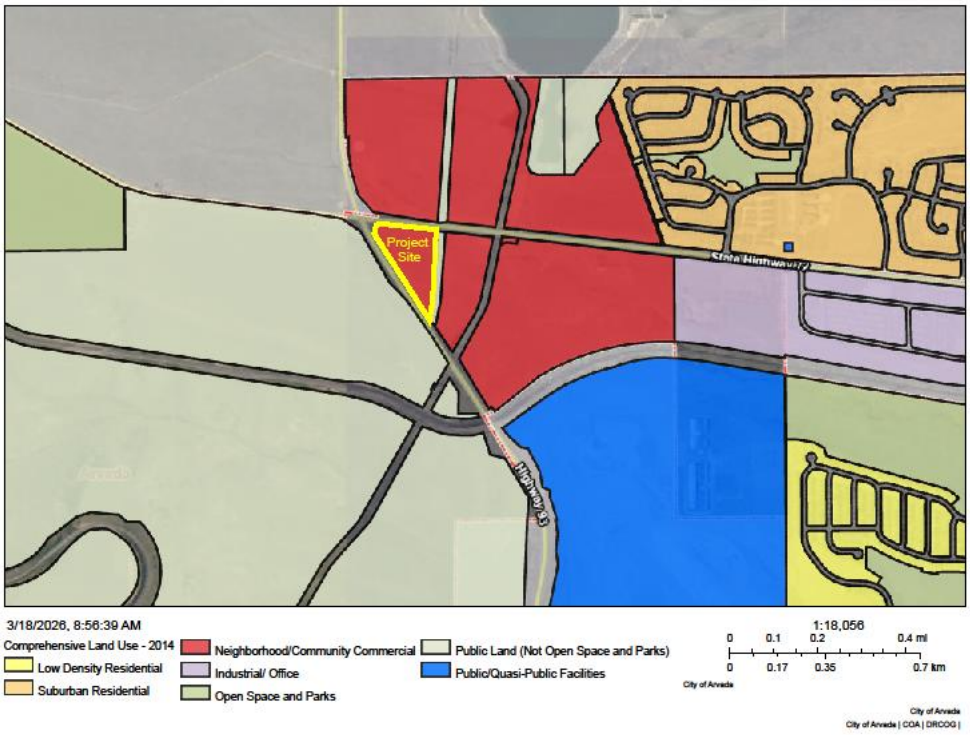
The purpose of the CG zone district is to accommodate a wide variety of general retail and service uses, as well as professional and business offices serving both neighborhood and area-wide needs. This district is typically situated along arterial streets, or where other appropriate high-volume vehicular access is available. The existing Neighborhood/Community Commercial Comprehensive Plan land use designation in this area supports retail centers that provide shopping services to adjacent and surrounding neighborhoods in the community. Under the existing PUD, height standards are more permissive than those under the CG zone district. The PUD allows a maximum building height of 85 feet whereas the CG zone allows a maximum height of 45 feet for principal buildings. Additionally, the CG zone provides specific development standards for setbacks, lot standards, and landscape minimums. The CG zone provides clarity for the development community by providing consistent standards utilized elsewhere in the City’s commercial areas.

Future entitlements required include a Minor Subdivision Plat to realign property boundaries between individual for sale lots as well as easements and Site Plans. These respective entitlements utilize administrative approvals provided the development application meets or exceeds all the applicable standards and regulations in the zone district and all the approval criteria for Site Plans and Minor Subdivision Plats.

PROJECT ANALYSIS

Compliance with the Comprehensive Plan

Comprehensive Plan Map



The Comprehensive Plan designates the properties as Neighborhood/Community Commercial (Com). The Neighborhood and Community Commercial/Office category encompasses retail centers that provide shopping services to adjacent and surrounding neighborhoods in the community. Community Commercial Centers are generally located at the intersection of two arterial streets and are generally larger in scale than Neighborhood Commercial Centers. Neighborhood Commercial Centers are generally located at the intersection of two collector streets or a collector and an arterial street. Large format retail may be appropriate if located along an arterial road and impacts can be addressed. The properties are maintaining the Neighborhood/Community Commercial designation, and the corresponding proposed CG zone district is a consistent and supported zone. The CG zone district generally implements the “Neighborhood and Community Commercial/Office” land use category stated in the Comprehensive Plan.

The applicant and staff held a pre-application meeting on June 3, 2025. The City is moving away from Planned Unit Developments and toward standardized zoning to allow for clarity and consistency in development for both developers and communities. Clarity and consistency in land development standards are promulgated through the standard LDC zone districts. The project could have been pursued under the PUD and through the Preliminary Development Plan process, but CED policy encourages rezoning for the aforementioned reasons. Further, the purpose of the Planned Unit Development (PUD) zoning district is to allow for the development of project-specific standards in instances where it is demonstrated that a project of comparable

quality and community benefit cannot be approved in any other zoning district or combination of zoning districts that are created by the LDC. While the overall Candelas PUD met these requirements there is nothing unusual or specific about the project site that would have met the criteria required for a PUD. As a stand-alone parcel, it can in fact be developed under the CG zone district.

Staff have determined that the Rezoning request is consistent with the surrounding and abutting land use designations and is consistent with the Arvada Comprehensive Plan. The Comprehensive Plan contains several goals and policies that guide development and investment decisions and direct future land use patterns.

The following goals and policies within the Comprehensive Plan further support the development proposal:

GOAL L-2: Plan for a balanced mix of commercial and residential land uses in Arvada.

> POLICY L-2.1: Complete Community
> The City will provide for a balanced mix of land uses by promoting redevelopment and continuing to reserve land for future commercial and industrial development as well as a variety of housing choices.

This goal and policy are furthered by the project by maintaining the commercial designation and original intent of the PUD, thus reserving the land for future commercial development. The rezoning provides clarity and consistency on the development standards. It likewise will provide neighborhood serving retail for the Candelas residential development fulfilling the mix of land uses stated in the policy.

GOAL L-5: Designate and promote redevelopment and infill to generate economic revitalization, improve physical conditions, and provide an appropriate mix of quality housing choices.

> POLICY L-5.3: Regulatory Climate to Encourage Redevelopment and Infill
> The City will continue providing incentives, as appropriate, and a positive regulatory climate in order to encourage infill development and redevelopment.

The Land Development Code defines “Infill Development” as development of vacant or partially developed parcels which are surrounded by, or in close proximity to, areas that are substantially or fully developed. The residential component of the Candelas community is substantially built out, and for the remaining residential parcels, is in the process of being constructed. The parcel to the immediate east is approved for the Luxelocker project. Entitlement applications for the properties north of the site are going through the City’s process for Comprehensive Plan Amendments and Rezonings to allow a mix of both commercial and residential development. The requested rezoning is consistent with the Comprehensive Plan goal of facilitating the development of these remaining properties. The rezoning would also be consistent with the rezoning north of the subject properties. Likewise, the project only went through two CED reviews before being scheduled for hearing, providing the positive regulatory climate that expedites the process for the development community. The clear development standards of the CG zone will further advance that positive climate with any subsequent Site Plan submittals.

GOAL CC-1: Plan Arvada as a City of different development character districts.

> POLICY CC-1.2: Promote Integration Within Districts through Design
> The City will promote integration and a sense of place within districts of the City through the context-sensitive design of new development.

The future site plan submittal will require review and approval by the Candelas Design Review Committee for compliance with the declarations of the Master Design Review Covenants. The project is proposing “Welcome Signage” to be reviewed through the Site Plan as recommended by the Northwest Arvada Sub-Area Plan. Currently there is no formal signage when entering the City in this area and the sub-area team identified this intersection for entry sign locations. Several members of the community in northwest Arvada have expressed that they feel disconnected from the rest of the City and it would be beneficial to identify this area as part of the City with signage. The community responded in support of City entry signage at this location, creating the sense of place spoken to in the policy.

> POLICY CC-1.3: Compatible Infill
> The City will encourage new infill development to consider and be sensitive to the character of existing neighborhoods. Considerations shall include building scale, placement, size, height transitions, landscape, streetscape, and other design measures (see also Redevelopment and Infill Principles).

The CG zone district development standards offer more compatible development regulations for the site’s future development than those under the existing PUD. Specifically, the CG zone allows a maximum height of 45 feet in contrast to the 85 feet allowed under the PUD.

GOAL CC-2: Establish and maintain Arvada’s distinct qualities and small-town identity.

> POLICY CC-2.2: High Quality Private Development
> The City will promote high quality architecture, site planning, landscaping, signage, and lighting for new residential and commercial developments.

Setbacks
The CG zone district’s lot and building standards are set out in Chapter 2 of the LDC. As part of the submitted concept plan, the applicant has provided a land use summary describing the development standards. All code required development and design standards will be reviewed through the Minor Subdivision and Site Plan applications.

Building Height
The maximum building height allowed in this CG zone district is 45 feet. Building heights will be reviewed as part of any Site Plan application and will be consistent with the zone of the parcel and LDC.

Open Space
The CG zone district requires a minimum of 20 percent of the site to be landscape surface area. Compliance with the landscaped surface area will be reviewed as part of any Site Plan.

Landscaping, Buffering and Fencing

The Site Plan landscaping will be required to comply with the standards and regulations within LDC 4-6 and any others that may apply. A landscape plan will be required to be submitted with any Site Plan application.

Building Design
All buildings constructed on the future lots will be required to adhere to Chapter 5 (Building Design) of the LDC. Design will be reviewed with any future Site Plan application.

Circulation and Connectivity
Pedestrian access to the site will be provided where the site abuts public streets. Two access points are proposed on the east side of the lot along Matterhorn Lane.

The applicant provided a Traffic Conformance letter for the proposed development of a gas station with convenience store use. The subject site was previously studied as part of the larger proposed development, Candelas 72-93, which is supported by a Traffic Impact Study (TIS). The approved TIS analyzed the Candelas development with a mix of commercial, retail, and industrial uses.

The proposed use would generate a negligible number of additional trips during the AM and PM peak hour and is expected to produce fewer than 10 additional turning movements to any given access. The proposed use would have a negligible impact on the surrounding network operations and would have no adverse effect on the conclusions or recommendations of the approved Candelas TIS.

The traffic impacts associated with the proposed use would be adequately accommodated by the road network proposed in the approved Candelas TIS without the need for additional improvements.

Grading and Drainage
The applicant provided a preliminary conceptual grading plan. Both SH-93 and SH-72 will sit above the proposed site. A detailed grading and drainage plan will be required to be submitted with a Site Plan application.

Parking and Loading
Off-street parking and loading requirements will be determined with any Site Plan application and shall be consistent with Article 4-5 of the LDC. Fueling/Service Stations require five spaces per 1,000 square feet.

Utility Services
Water and sanitary sewer service is provided by the City of Arvada, and they have the capacity to service the site.

Public Service Company (XCEL) has no objection to this proposed rezone.

Police and Fire Protection
The proposal has been reviewed by the Arvada Fire and Protection District. All Fire Lane and Emergency Access (Fire Apparatus Access Roads) roads shall provide minimum turning radius and an outside radius sufficient for all navigation of the AFPD apparatus and allow effective

emergency operations. This will be reviewed with the Site Plan submittal. The property is served by Arvada Police.

LAND DEVELOPMENT CODE APPROVAL CRITERIA

It is the responsibility of the applicant to justify the requested land use application. The Planning Commission should make a recommendation to the City Council based on its findings regarding the approval criteria shown in the table(s) below and upon testimony heard during the public hearing as it applied to the criteria.

Staff performed an analysis of the proposal, based on the approval criteria listed in Chapter 8 of the Land Development Code, and presents the following findings:

Div. 8-3-4 Zoning and Rezoning Approval Criteria	Finding	Rationale
1. The rezoning is consistent with the Arvada Comprehensive Plan, or an adopted sub-area plan, corridor plan, or urban renewal plan, or reflects conditions that have changed since the adoption of the Comprehensive Plan.	Complies	The rezoning to CG is consistent with the Comprehensive Plan designation of Neighborhood/Community Commercial on the Future Land Use map.
2. The intended land use is consistent with the stated intent of the proposed zoning district.	Complies	The intended land use is consistent with the intent of the CG zone district to accommodate a wide variety of general retail and service uses, as well as professional and business offices serving both neighborhood and area-wide needs.
3. Facilities and services (including sewage and waste disposal, water, gas, electricity, police and fire protection, and roads and transportation, as applicable) will, prior to development, be available to serve the subject property while maintaining adequate levels of service to existing development.	Complies	All public facilities and services are available to service to the site. Additional infrastructure necessary to service the site will be constructed after approval of the Site Plan and Minor Subdivision. Water allocation will be deducted from the remaining JCMD Commercial Water Allocations.
4. The intended land use for which the rezoning is sought will not result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated.	Complies	The intended land use will not result in significant adverse impacts.
5. The rezoning is consistent with the character of existing or planned development on adjacent properties and in the surrounding area or neighborhood, or measures will be taken to substantially buffer or otherwise substantially mitigate any negative impacts.	Complies	The rezoning is consistent with the character of existing development and the future commercial development to the west and north. It enforces the goals and policies of

		the Comprehensive Plan to serve the surrounding residential communities.

Div. 8-3-11-4 (D) Major Modification Approval Criteria	Finding	Rationale
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The major modification is consistent with the Comprehensive Plan and the stated purpose of the CG zone district. All general lot and building standards within the CG zone district will be adhered to as well as the Use-Specific standards in Section 3-1-3-8 with the exception of the requested Major Modification for 10 pump islands. Fueling/Service Stations are an allowed “Limited” use in the CG zone. The use is compatible with the Neighborhood/Community Commercial designation of the Comprehensive Plan by providing neighborhood services. The applicant has stated that the square footage between 10 fuel islands in a linear setting verses a double stacked 5 fuel islands, as would be permitted under the LDC, is approximately 231 square feet less in area. To mitigate the impacts of the major modification for the 10 pump islands and further comply with the intent of the Comprehensive Plan and Sub-Area plan, the applicant has offered to provide “Welcome to Arvada” signage as a gateway into the City. Final details of the welcome sign will be coordinated with city staff as part of the site plan.
2. The requested modification addresses a unique situation or incorporates creative sign design.	Complies	The proposed Major Modification is due to the configuration of Lot 1 which is an irregular quadrilateral. Access to the site is only provided from the east side of the property which makes the lot long west to east. Future lot line adjustments are proposed which will be addressed through a Minor Subdivision Plat and will realign the lots to create more functional developments. However, due to the linear east, west nature of the lot and required circulation, the

		applicant proposes that the extended fuel pumps are more logical for the site. The design of the 10-pump canopy is approximately 231 square feet less than the double stacked five pump island design. The project proposes to incorporate design features such as welcome signage to the City and enhanced landscaping in order to mitigate the impacts of the modification.
3. The requested modification will not result in incompatible development.	Complies	The major modification will not result in incompatible development as the use is consistent with the allowed uses in the zone as well as the Comprehensive Plan.
4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The modification will not have significant impacts on the health, safety or general welfare of surrounding property owners or the general public.
5. Any adverse impacts resulting from the Modification will be mitigated to the extent reasonably feasible.	Complies	Additional landscaping, above that required by the LDC, "Welcome Signage" signifying entry to the City as detailed in the Northwest Arvada Sub-Area Plan, and staff recommended enhanced architectural design of the canopy should be conditioned to mitigate any impacts. These conditions would be applied through the Site Plan review.

STAFF RECOMMENDATION

Based upon project analysis and review of the Land Development Code approval criteria, staff recommends conditional approval of the Rezoning and Major Modification pursuant to the following:

- Additional landscaping above that required by the LDC shall be incorporated into the Site Plan to mitigate any adverse visual impacts the canopy could have on adjacent properties.
- The project shall incorporate "Welcome Signage" to be reviewed through the Site Plan consistent with the Northwest Arvada Sub-Area Plan.
- The canopy over the fuel pumps shall have enhanced architectural detailing to mitigate impacts viewable from the Right-of-Way.

The Planning Commission may recommend denial of the request(s) if it cannot make affirmative findings of the approval criteria stated above.

QT4234 Neighborhood Meeting

October 2, 2025

City Planning: Julia Duncan

QuikTrip: Craig Romrell, Braxton Lee

Galloway: Aaron McLean, Jenny Romano

Attendance: Staff, Applicant team, Owner representative and Broker(s). No public was in attendance.

Presentation: A discussion of the project with follow-up Questions and Answers was had with those in attendance as listed above. The discussion centered around Concept Plan and Building Elevations along with QuikTrip in general; how they are expanding in the market and examples of other sites.

Discussion: Those that were in attendance were familiar with the proposed development project, so the discussions focused on timing of the project and next steps with the City. Additionally, conversations were held on where other QuikTrip stores are located, their operations and future sites.

RE-ZONING CONCEPT PLAN

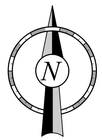
QUIKTRIP STORE #4234

9295 MATTERHORN LN
ARVADA, CO

PARCEL OF LAND IN THE NORTHWEST 1/4 SECTION 21
TOWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO



Vicinity Map
1"=1000'



SHEET INDEX

NO.	TITLE
1	COVER SHEET
2	REZONING MAP
3	LOT 1A CONCEPTUAL SITE PLAN
4	LOT 1A CONCEPTUAL GRADING PLAN
5	FIRE TRUCK TURN ANALYSIS

BASIS OF BEARING:

BEARINGS ARE BASED ON THE STATE PLAN COORDINATE SYSTEM ESTABLISHED FOR THE COLORADO CENTRAL ZONE 0502, NORTH AMERICAN DATUM (NAVD) OF 1983. DISTANCES SHOWN HEREON ARE GROUND UNITS. BEING THE WEST LINE OF THE NORTHWEST 1/4 OF SECTION 21, BEARING S00°12'04"E.

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF ARVADA, IN THE COUNTY OF JEFFERSON, STATE OF COLORADO, AND IS DESCRIBED AS FOLLOW:

LOT 1

LOT 1A, BLOCK 1A, CANDELAS 93–72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO. ±164,440 S.F. OR 3.775 ACRES

LOT 2

LOT 2A, BLOCK 1A, CANDELAS 93–72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.
±39,998 S.F. OR 0.918 ACRES

LOT 3

LOT 3A, BLOCK 1A, CANDELAS 93–72 SOUTH FILING NO. 1, AMENDMENT NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 3, 2025 AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO. ±67,680 S.F. OR 1.554 ACRES

LOT 4

LOT 4A, BLOCK 1A, CANDELAS 93–72 SOUTH FILING NO. 1, AMENDMENT NO. 1, RECORDED AT RECEPTION NO. 2025019747, COUNTY OF JEFFERSON, STATE OF COLORADO.
±140,529 S.F. OR 3.226 ACRES

NARRATIVE SUMMARY:

THE SITE IS CURRENTLY ZONED AS PLANNED UNIT DEVELOPMENT (PUD) AND IS PROPOSED TO BE REZONED TO COMMERCIAL GENERAL (CG). LOT 1 IS PROPOSED TO BE DEVELOPED INTO A FUELING STATION AND CONVENIENCE STORE WITH ASSOCIATED PARKING SPACES AND DRIVE AISLES. LOTS 2, 3 & 4 ARE TO REMAIN UNDEVELOPED AT THIS TIME.

MUNICIPAL CONTACT LIST:

CITY OF ARVADA

CITY OF ARVADA – PLANNING DEPARTMENT
8101 RALSTON RD
ARVADA, CO, 80002
TEL: (720) 898-7435
CONTACT:

CITY OF ARVADA – TRAFRIC
8101 RALSTON RD
ARVADA, CO, 80002
TEL: (720) 898-7720

ARVADA FIRE PROTECTION DISTRICT
7903 ALLISON WAY
ARVADA, CO, 80005
TEL: (303) 424-3012

CITY OF ARVADA – UTILITIES
8101 RALSTON RD
ARVADA, CO, 80002
TEL: (720) 898-7760
CONTACT:

PROJECT CONTACT LIST:

SURVEYOR OF RECORD
ALTURA LAND CONSULTANTS
JESUS LUGO
6950 S. TUSCON WAY, UNIT C
CENTENNIAL, CO. 80113
TEL: (303) 902-7791

ENGINEER OF RECORD
GALLOWAY & COMPANY
TREVEN EDWARDS, P.E.
1155 KELLY JOHNSON BLVD. STE. 305
COLORADO SPRINGS, CO, 80920
TEL: (719) 900-7220

QT REAL ESTATE PROJECT MANAGER
QUIKTRIP CORPORATION
TARA LIMBACH
5725 FOXRIDGE DR.
MISSION, KS 66202
TEL: (816) 729-1393

QT CIVIL PROJECT MANAGER
QUIKTRIP CORPORATION
ASHLEY GOODRICH
4705 S. 129TH EAST AVE.,
TULSA, OK 74134
TEL: (269) 425-9638

COMMERCIAL, GENERAL LOT & BUILDING STANDARDS

LOT STANDARDS

MIN. LOT AREA	5,000 SF
MIN. LOT WIDTH	50 FT
MAX. LOT COVERAGE	35%

LOT STANDARDS (FUEL SERVICE STATION)

MIN. LOT AREA	12,000 SF
MIN. LOT WIDTH	120 Ft
MAX. PUMP ISLANDS	5
PROPOSED PUMP ISLANDS PER MAJOR MOD.	10

SETBACK STANDARDS

MIN. FRONT	20 FT
MIN. STREET SIDE	20 FT
MIN. INTERIOR SIDE	10 FT
MIN. REAR	20 FT
MIN. FRONT PARKING	20 FT
FUEL STATION EQUIPMENT	40 FT

BUILDING STANDARDS

MAX HEIGHT, PRINCIPAL BUILDING	45 FT
MAX. HEIGHT, ACCESSORY BUILDING	18 FT
MAX. HEIGHT, MINI-STRUCTURE	12 Ft

SITE STANDARDS

MIN. LANDSCAPE SURFACE AREA	20%
MAX. OUTDOOR DISPLAY	5% OF ENCLOSED RETAIL FLOOR AREA
MAX. OUTDOOR STORAGE	5% OF LOT AREA
MIN. HEIGHT TRANSITION ZONE DEPTH ABUTTING RA AND RN DISTRICTS	SEE SECTION 2-1-10-3, HEIGHT TRANSITION TO RA AND RN ZONING DISTRICTS

PROJECT NO.:QKT00004234.21

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

QuikTrip No. 4234
9295 MATTERHORN LN
ARVADA, CO

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PROTOTYPE:	P-123
DIVISION:	83
VERSION:	001
DESIGNED BY:	ELB
DRAWN BY:	ELB
REVIEWED BY:	TJE/JAO

REV	DATE	DESCRIPTION
1	12/18/25	REZONING CONCEPT PLAN 2ND SUBMITTAL

ORIGINAL ISSUE DATE: 08/15/2025

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
1 of 4

FILE LOCATION:H:\Q\Quiktrip\QKT004234-Arvada, CO\DOV\2-Plan\83-4234-Civil.dwg TAB NAME:Cover (City Concept) USER:Evon_Boczek SAVED:2/19/2026 5:15 PM PLOTTED:2/19/2026 5:16 PM

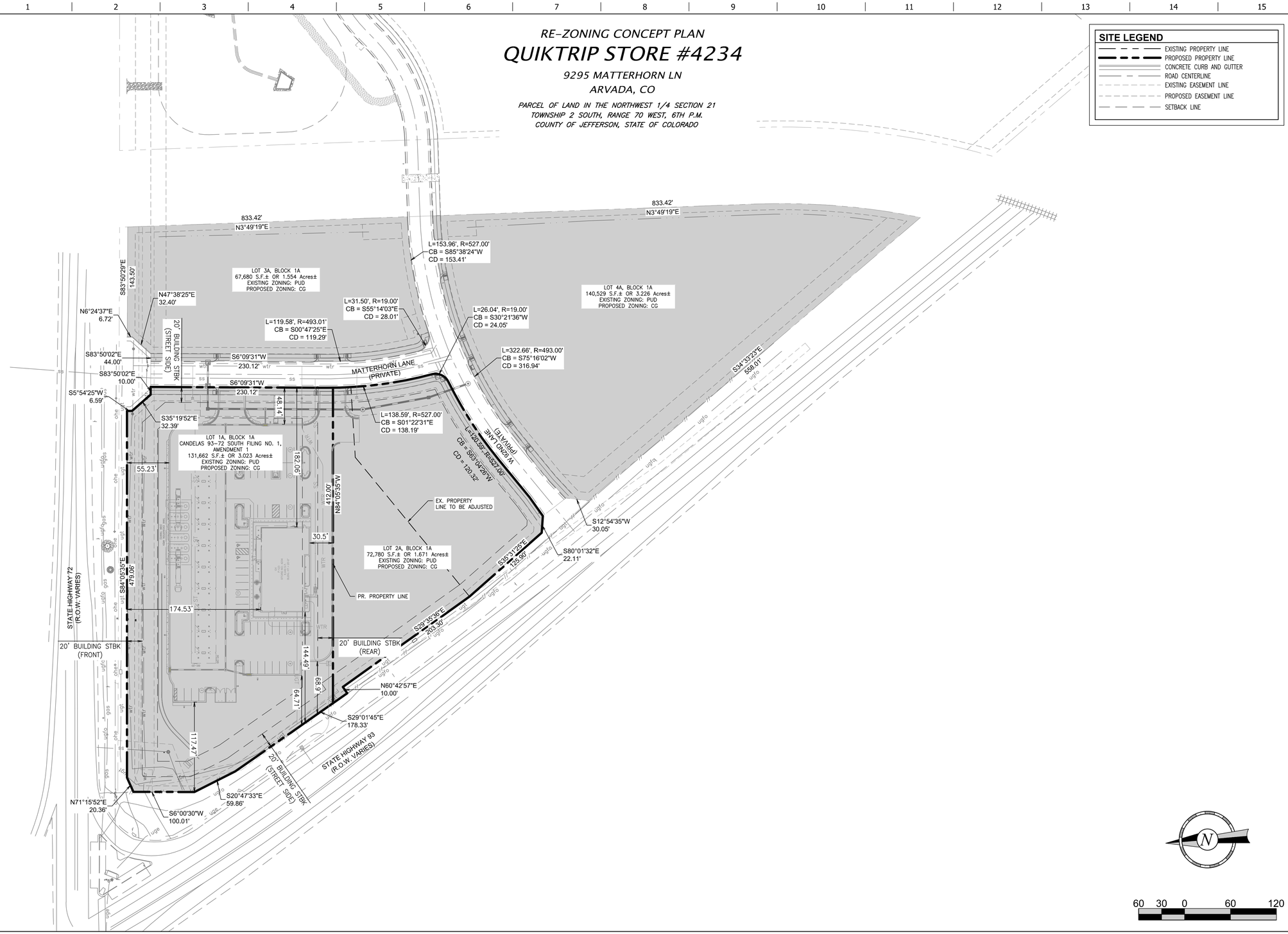
RE-ZONING CONCEPT PLAN
QUIKTRIP STORE #4234

9295 MATTERHORN LN
ARVADA, CO

PARCEL OF LAND IN THE NORTHWEST 1/4 SECTION 21
TOWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO

SITE LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- CONCRETE CURB AND GUTTER
- ROAD CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- SETBACK LINE



60 30 0 60 120

Galloway
1155 Kelly Johnson Blvd., Suite 305
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REV	DATE	DESCRIPTION
1	12/19/25	REZONING CONCEPT PLAN 2ND SUBMITTAL

ORIGINAL ISSUE DATE: 08/15/2025

SHEET TITLE:
REZONING MAP

SHEET NUMBER:
2 of 4

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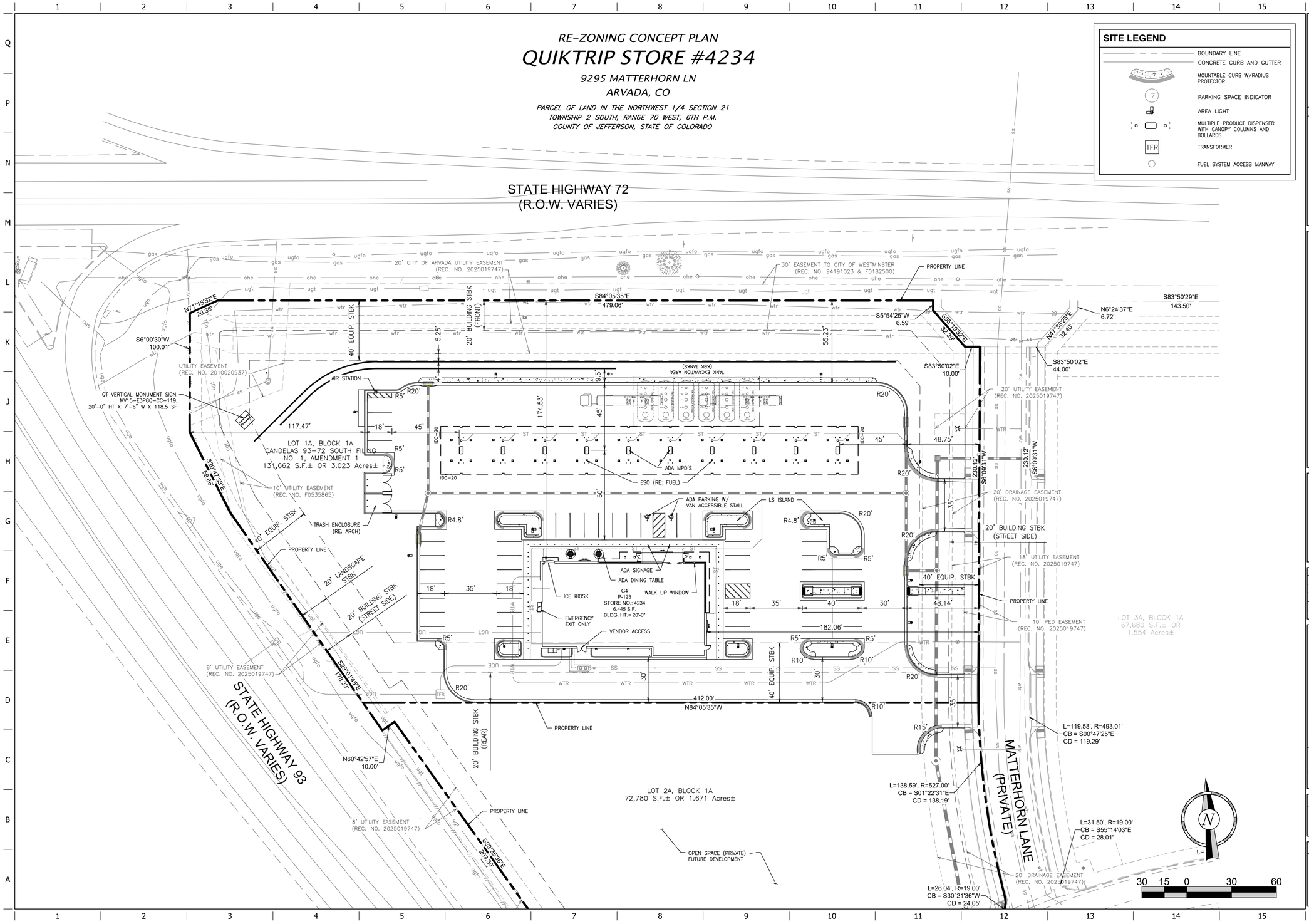
RE-ZONING CONCEPT PLAN

QUIKTRIP STORE #4234

9295 MATTERHORN LN
ARVADA, CO

PARCEL OF LAND IN THE NORTHWEST 1/4 SECTION 21
TOWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO



SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/RADIUS PROTECTOR
- PARKING SPACE INDICATOR
- AREA LIGHT
- MULTIPLE PRODUCT DISPENSER WITH CANOPY COLUMNS AND BOLLARDS
- TRANSFORMER
- FUEL SYSTEM ACCESS MANWAY

PROJECT NO.:QKT00004234.21

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

QuikTrip No. 4234
9295 MATTERHORN LN
ARVADA, CO

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REVIEWED BY: TJE/JAO

REV	DATE	DESCRIPTION
1	12/18/25	REZONING CONCEPT PLAN 2ND SUBMITTAL

ORIGINAL ISSUE DATE: 08/15/2025

SHEET TITLE:
LOT 1A CONCEPTUAL SITE PLAN

SHEET NUMBER:
3 of 4

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RE-ZONING CONCEPT PLAN

QUIKTRIP STORE #4234

9295 MATTERHORN LN
ARVADA, CO

PARCEL OF LAND IN THE NORTHWEST 1/4 SECTION 21
TOWNSHIP 2 SOUTH, RANGE 70 WEST, 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO

GRADING LEGEND	
ST	STORM PIPE (< 10" NEW)
	STORM PIPE (> 12" NEW)
	STORM PIPE (> 12" EXISTING)
FD	FRENCH DRAIN
CD	BACK OF CURB DRAIN
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)

G4
P-123
STORE NO.: 4234
6,445 S.F.
BLDG. HT.= 20'-0"

LOT 3A, BLOCK 1A
67,680 S.F.± OR
1.554 Acres±

30 15 0 30 60

PROJECT NO.:QKT00004234.21

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

QuikTrip No. 4234
9295 MATTERHORN LN
ARVADA, CO

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REV	DATE	DESCRIPTION
1	12/18/25	REZONING CONCEPT PLAN 2ND SUBMITTAL

ORIGINAL ISSUE DATE: 08/15/2025

SHEET TITLE:
LOT 1A CONCEPTUAL GRADING PLAN

SHEET NUMBER:
4 of 4

FILE LOCATION=N:\Q\Quiktrip\QKT004234-Arvada, CO\00\X\2-Plan\83-4234-Civil.dwg TAB NAME:Grading (City Concept) USER:Evan_Boczek SAVED:2/19/2026 5:15 PM PLOTTED:2/19/2026 5:16 PM

CITY OF ARVADA

REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM 10.A.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: CB26-016, An Ordinance Repealing, Retitling, and Reenacting Chapter 94, Article II, Construction and Repair of Sidewalks, etc., of the Arvada City Code (Ordinance No. 4932) (Presenter: Chris Lisberg, Assistant City Engineer)

Report in Brief

"PRESENTER: Chris Lisberg, Assistant City Engineer"

Updates to Chapter 94, Article II of the Arvada City Code are proposed to establish an application-based financial assistance framework for eligible single-family residential properties in advance of the May 2026 launch of the Sidewalk Repair Assistance Program. Under the proposed program, applicants at or below 80% of current Denver Metro HUD income limits would be eligible for 100% financial assistance, while applicants above that threshold would be eligible for 50% financial assistance.

The Arvada team recommends that the City Council approve CB26-016, An Ordinance Repealing, Retitling, and Reenacting Chapter 94, Article II, Construction and Repair of Sidewalks, etc., of the Arvada City Code.

Financial Impact

Funding for the program will be provided by the Pavement Management Program budget. The program team is recommending an initial budget of $300,000 annually, which will be reevaluated annually through the city's budget process.

Background

Since the 1980s, the City has maintained what was known as the “50/50 Program” for sidewalks (Sec. 94-36, Cost Sharing and Completing the Work), which served as an incentive to support code enforcement of sidewalk repairs. The 50/50 Program was discontinued in 2022 to examine its effective use and how to address ADA requirements. Through the City Council New Business Request process, along with Council workshops held in August 2024 and October 2025, the program’s goals, structure, and financial approach were further refined and finalized in preparation for implementation in May 2026, pending approval of this ordinance update.

Discussion

The primary revisions to Chapter 94, Article II of the Arvada City Code include:

1. Replacing the previous 50/50 cost-sharing provision with an application-based financial assistance program for eligible single-family residential properties.
2. Establishing financial assistance tiers under which eligible households at or below 80% of current Denver Metro HUD income limits may receive 100% financial assistance, while eligible households above 80% of current Denver Metro HUD income limits may receive 50% financial assistance.
3. Establishing application eligibility criteria, including legal property ownership, single-family residential land use, location of the sidewalk within City right-of-way or accessible by easement, and sidewalk condition below the City’s minimum acceptable condition.

4. Adding Section 94-35, Notice of Completion and Payment, to clarify that when work is completed by or under the direction of the City, the property owner will receive notice of completion, the amount due, and the applicable payment requirements and timeline.

The proposed ordinance revisions update Chapter 94, Article II to align the City Code with the Sidewalk Repair Assistance Program while preserving the City's existing enforcement, notice, hearing, assessment, and installment payment framework.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

This work aligns with the Infrastructure Work System Services INF4: Innovates safe, accessible, and efficient connections to modes of transportation, including transit, streets, sidewalks and bikeways.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that City Council approve CB26-016, An Ordinance Repealing, Retitling, and Reenacting Chapter 94, Article II, Construction and Repair of Sidewalks, etc., of the Arvada City Code.

Suggested Motion:

I move that CB26-016, An Ordinance Repealing, Retitling, and Reenacting Chapter 94, Article II, Construction and Repair of Sidewalks, etc., of the Arvada City Code, be (approved on final reading, numbered 4932 and ordered published by title only) (rejected).

Prepared by:
Tammy Hedlund, Legal Specialist

Reviewed by:

Approved by:

Claudia Vaughan, City Engineer	04/14/2026
Jacqueline Rhoades, Director of Infrastructure	04/16/2026
Bryan Archer, Chief Financial Officer	04/17/2026
Tammy Hedlund, Legal Specialist	04/17/2026
Zachary Woolweaver, Assistant City Attorney I	04/17/2026
Rachel Morris, City Attorney	04/18/2026

Allison Scheck, Deputy City Manager 04/18/2026
Don Wick, City Manager 04/18/2026

Enclosure, exhibits & attachments required to support the report

COUNCIL BILL NO. 26-016
ORDINANCE NO. 4932

AN ORDINANCE REPEALING, RETITLING, AND REENACTING CHAPTER 94, ARTICLE II, CONSTRUCTION AND REPAIR OF SIDEWALKS, ETC., OF THE ARVADA CITY CODE

WHEREAS, the City of Arvada has the authority under C.R.S. § 31-15-103, and otherwise under its authority as a Home Rule city to establish ordinances, regulations, and procedures that protect life and property; and

WHEREAS, the City Council finds it is important for the City to frequently review, update, and correct language in its code of ordinances; and

WHEREAS, the following article is being repealed, retitled, and reenacted to reestablish the Sidewalk Repair Assistance Program, as well as provide additional clarity and concision throughout the article.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. Article II of Chapter 94, Construction and Repair of Sidewalks, ETC., of the Arvada City Code is hereby repealed, retitled, and reenacted in its entirety to read as follows:

"Article II. Construction and Repair of Curbs, Gutters, and Sidewalks.

Sec. 94-31. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

City engineer means the city engineer or designee thereof.

City manager means the city manager or designee thereof.

Denver Metro HUD home income limits means the current home income limits measured by area medium income ranges published annually by the United States Department of Housing and Urban Development (HUD).

Property owner means the legal owner(s) of property within Arvada.

Sec. 94-32. Duty to maintain, repair, and reconstruct.

Every property owner must reconstruct, repair, and maintain in good order all curbs, gutters, and sidewalks on their property.

Sec. 94-33. Official grade.

(a) *As required by the city engineer.* Except as otherwise provided, all curbs, gutters, and sidewalks constructed, reconstructed, or repaired within the city shall be located and built upon the most current official grade the city has adopted at the place where the construction, reconstruction, or repair is to be done. If any curb, gutter, or sidewalk constructed, reconstructed, or repaired within the city is not laid and built upon the official grade, the property owner must, upon notice from the city engineer reconstruct the curb, gutter, or sidewalk to conform to the official grade within five days of such notice.

> *Exception.* The city engineer, in their sole discretion, may order or permit a curb, gutter, or sidewalk to be reconstructed or repaired at the grade upon which it was formerly constructed and built if it would not be practical or just or would not make for uniformity to have it reconstructed or repaired upon or according to the official grade the city has adopted.

Sec. 94-34. Notice to reconstruct or repair.

(a) *Required.* The city manager may serve a written notice to reconstruct or repair upon a property owner, or the property owner's agent, when the curb, gutter, or sidewalk on the property is in need of reconstruction or repair. Service of notice may be completed by registered or certified United States mail, or personal delivery of the notice.

(b) *Contents of notice.* Any notice served under the provisions of this section must contain the following information:

(1) A specific description of the work to be done;

(2) The plans and specifications to be followed or the place where they may be obtained;

(3) The time within which such required reconstruction or repair must be completed; and

(4) Directions for a property owner to access and file a hearing request form if they wish to contest a notice issued under the provisions of this section.

(c) *Hearing.* A property owner who wishes to contest a notice issued under this section may do so by filing a hearing request form at any time within ten days of the date of service of the notice. The hearing shall be conducted by the city manager and shall follow the procedures set forth in chapter 2 of this code.

(d) *Effect of non-compliance.* If a property owner fails to comply with a notice served in accordance with the terms of section 94-34, or fails to comply with an order of the city manager following a hearing within the time specified therein, then the work described in such notice may be done by the city, under the direction of the director of infrastructure, in accordance with the procedures established in this article.

Sec. 94-35. Financial assistance.

(a) *Available.* The city may provide financial assistance to offset the costs a property owner may incur related to reconstruction or replacement of a sidewalk. Only properties containing single family homes will be eligible for financial assistance. To ensure the most efficient use of funds, each property owner who applies for financial assistance will be separated into two tiers of assistance based on aggregate annual household income.

(1) An applicant with an aggregate household income equal to or below the 80% threshold of the current applicable Denver Metro HUD income limits will be eligible for financial assistance equal to 100% of the total cost of the project.

(2) An applicant with an aggregate household income exceeding 80% of the current applicable Denver Metro HUD income limits will be eligible for financial assistance equal to 50% of the total cost of the project.

(b) *Criteria.* Residential property owners seeking reconstruction or repair of a sidewalk on their property are eligible to apply for financial assistance from the city. The application for financial assistance will be available on the city's website. The city engineer will evaluate each application to ensure the applicant meets the following criteria:

(1) The applicant is the legal owner of the property;

(2) The property is classified as a single family residence;

(3) The sidewalk in question is within the city's right-of-way or access thereto has been previously granted to the city by an easement; and

(4) The condition of the sidewalk is deteriorated beyond the minimum acceptable condition as shown on the city's website.

(c) *City engineer's review.* Following the city engineer's review of each application, the property owner will be notified about the status of their application. If accepted, the city will coordinate with the property owner regarding scheduling, and the work will be managed by the city engineer. In addition to the criteria listed above, the city engineer will also consider planned major capital maintenance projects as defined by chapter 2 of this code. If, within two years of submission of the application, the property owner's sidewalk would be reconstructed as a part of

a planned major capital maintenance project, the city will deny the application and will reconstruct the sidewalk during the project at no cost to the property owner.

Sec. 94-36. Notice of completion and payment.

(a) *Required.* Whenever any reconstruction or repair is done by or under the direction of the city, either under section 94-34 or pursuant to an accepted application for financial assistance under section 94-35, the city manager may cause a written notice of completion and payment to be served upon the property owner, or the agent of the owner. Service of the notice may be completed by registered or certified United States mail, or personal delivery of the notice.

(b) *Contents of notice.* Any notice served under the provisions of this section must contain the following information:

(1) The date that the work on the sidewalk, curb, or gutter was completed;

(2) The total cost of the project assessed against the property owner, subject to financial aid granted under section 94-35, if applicable;

(3) The property owner's right to secure the entire balance of the assessment by a promissory note and pay in up to twelve substantially equal, interest free monthly installment payments, with the first payment due thirty days after the date of completion;

(4) If a property owner elects to pay in installment payments, the property owner may repay the entire balance of the promissory note at any time. Failure to pay any installment when due will cause the whole unpaid balance of the promissory note to become due and payable immediately at the option of the city; and

(5) If the property owner does not pay the city the entire balance of the assessment, the city may seek a lien against the property pursuant to chapter 59 of this code.

Sec. 94-37. Agent of property owner.

Nothing in this article precludes an agent of a property owner, including a property owners' association or homeowners' association to which implicated property is bound under its covenants and agreements, from acting on behalf of a property owner, but the fulfillment of duties and obligations incurred under this article is the responsibility of the property owner.

Sec. 94-38. Violations and penalties.

It shall be unlawful for any property owner to fail, neglect, or refuse to comply with the requirements of any such notice to reconstruct or repair served upon or in accordance with the provisions of this chapter, within the time specified therein, and each day's neglect or refusal to

comply with the terms of said notice shall constitute a separate offense. Each offense will be punishable by a fine, not to exceed the limits established in section 1-5 of the Arvada City Code.

Secs. 94-39—94-60. Reserved."

Section 2**.** Severability. Should any provision of this ordinance be declared by a court to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any part thereof, other than the part so declared unconstitutional or invalid. The City Council declares it would have adopted this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 3. This Ordinance shall be effective five days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 21st day of April, 2026.

PASSED, ADOPTED AND APPROVED this 5th day of May, 2026.

_____
Lauren Simpson, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

BY: _____

Publication Dates: April 23, 2026
May 7, 2026

REDLINE/~~STRIKETHROUGH VERSION~~

FOR INFORMATION ONLY -- NOT PART OF THE ORDINANCE

Underlined indicates new material
~~Strikethrough~~ indicates deleted material

Article II. Construction and Repair of Curbs, Gutters, and Sidewalks.

Sec. 94-31. Definitions.

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City engineer means the city engineer or designee thereof.

City manager means the city manager or designee thereof.

Denver Metro HUD home income limits means the current home income limits measured by area medium income ranges published annually by the United States Department of Housing and Urban Development (HUD).

Property owner means the legal owner(s) of property within Arvada.

Sec. 94-32. Duty to maintain, repair, and reconstruct.

~~(a) It shall be the duty of~~ Every ~~owner of~~ property ~~located within the city to~~ owner must ~~repair,~~ reconstruct, repair, and maintain in good order all curbs, gutters, and sidewalks on~~, abutting or adjacent to the~~ their property.

~~(b) It is unlawful for any owner to fail, neglect or refuse to comply with the requirements of any such notice served upon or in accordance with the provisions of this chapter, within the time specified therein, and each day's neglect and refusal to comply with the terms of said notice shall constitute a separate offense.~~

Sec. 94-33. Official grade.

(a) *As required by the city engineer.* ~~All curbs, gutters and sidewalks constructed, reconstructed or repaired within the city,~~ Except as otherwise provided, all curbs, gutters, and sidewalks constructed, reconstructed, or repaired within the city shall be located and built upon the most current official grade the city has adopted at the place where the construction, reconstruction, or repair is to be done. If any curb, gutter, or sidewalk constructed, reconstructed, or repaired within the city is not laid and built upon the official grade, ~~it shall be the duty of the person laying or building the same or~~

~~causing the same to be laid and built,~~ the property owner must, upon notice from the city engineer, ~~to alter and~~ reconstruct the curb, gutter, or sidewalk to conform to the official grade within five days of such notice.

~~(b) Where, in the opinion of the city engineer, it would not be practical or just and would not make for uniformity to have such curb, sidewalk and gutter reconstructed or repaired upon or according to the official grade, as then established, the city engineer may order or permit such sidewalk, curb and gutter to be reconstructed or repaired upon or according to the grade upon which such sidewalk or curb and gutter was formerly constructed and built.~~

Exception. The city engineer, in their sole discretion, may order or permit a curb, gutter, or sidewalk to be reconstructed or repaired at the grade upon which it was formerly constructed and built if it would not be practical or just or would not make for uniformity to have it reconstructed or repaired upon or according to the official grade the city has adopted.

Sec. 94-34. Notice to ~~owner to repair curb, gutter and sidewalks; service.~~ reconstruct or repair.

(a) ~~When any curb, gutter and sidewalk in the front, side or rear of any premesise in the city shall be in need of repair or reconstruction, the city manager, or his designee, shall caur notice in writing to be served upon the owner of such premises or the agent of the owner to repair or reconstruct the same within 30 days or an extended period at the discretion of the city manager or his designee. Service of notice may be completed by registered or certified United States mail, or personal delivery of this notice.~~ *Required.* The city manager may serve a written notice to reconstruct or repair upon a property owner, or the property owner's agent, when the curb, gutter, or sidewalk on the property is in need of reconstruction or repair. Service of notice may be completed by registered or certified United States mail, or personal delivery of the notice.

(b) *Contents of notice.* Any notice served under the provisions of this section must contain the following information:

(1) A specific description of the work to be done;

(2) The plans and specifications to be followed or the place where they may be obtained;

(3) The time within which such required reconstruction or repair must be completed; and

(4) Directions for a property owner to access and file a hearing request form if they wish to contest a notice issued under the provisions of this section.

(c) *Hearing.* A property owner who wishes to contest a notice issued under this section may do so by filing a hearing request form at any time within ten days of the date of service of the

notice. The hearing shall be conducted by the city manager and shall follow the procedures set forth in chapter 2 of this code.

(d) *Effect of non-compliance.* If a property owner fails to comply with a notice served in accordance with the terms of section 94-34, or fails to comply with an order of the city manager following a hearing within the time specified therein, then the work described in such notice may be done by the city, under the direction of the director of infrastructure, in accordance with the procedures established in this article.

~~**Sec. 94-34. Contents.**~~

~~Any notice served in accordance with provisions of this chapter shall contain a specific description of the work to be done, the plans and specifications to be followed or the place where the same may be obtained, and shall specify the time within which such required repairs or reconstruction shall be completed, or if a hearing is conducted, such repair or reconstruction shall be completed as determined by the hearing.~~

~~**Sec. 94-35 Hearing.**~~

~~The owner shall have ten days from the date of service to make a written request for a hearing contesting the notice to repair or reconstruct any sidewalk, curb and gutter. Said hearing shall be conducted by the city manager, or his designee, and the procedures followed shall not be inconsistent with those set forth in chapter 2.~~

Sec. 94-35. ~~Cost sharing and completing the work.~~Financial assistance.

(a) ~~Except where public streets are scheduled to undergo major capital maintenance as defined by section 2-291 within two years, curb, gutter and sidewalk shall be maintained on a 50/50 cost sharing basis whereby the property owner shall pay one-half of the reasonable cost to replace or repair existing curb, gutter and sidewalk and the city shall pay the other half. The city shall pay the entire cost of existing curb, gutter and sidewalk replacement or repair for public streets that are scheduled to undergo major capital maintenance as defined by section 2-291 within two years. The reasonable cost shall be determined prior to March 15 of each year and shall be based upon the contract unit prices accepted by the city through a bid process or unit prices determined pursuant to section 2-171 et seq.~~ *Available.* The city may provide financial assistance to offset the costs a property owner may incur related to reconstruction or replacement of a sidewalk. Only properties containing single family homes will be eligible for financial assistance. To ensure the most efficient use of funds, each property owner who applies for financial assistance will be separated into two tiers of assistance based on aggregate annual household income.

(1) An applicant with an aggregate household income equal to or below the 80% threshold of the current applicable Denver Metro HUD income limits will be eligible for financial assistance equal to 100% of the total cost of the project.

(2) An applicant with an aggregate household income exceeding 80% of the current applicable Denver Metro HUD income limits will be eligible for financial assistance equal to 50% of the total cost of the project.

(b) ~~The property owner may elect to hire a contractor licensed pursuant to section 78-181 et seq. to perform the work. The property owner will be reimbursed by the city for half the reasonable cost, as determined by section 94-36(a), upon completion of the work, inspection and approval by the city, and receipt of a paid invoice from the contractor.~~ *Criteria.* Residential property owners seeking reconstruction or repair of a sidewalk on their property are eligible to apply for financial assistance from the city. The application for financial assistance will be available on the city's website. The city engineer will evaluate each application to ensure the applicant meets the following criteria:

(1) The applicant is the legal owner of the property;

(2) The property is classified as a single family residence;

(3) The sidewalk in question is within the city's right-of-way or access thereto has been previously granted to the city by an easement; and

(4) The condition of the sidewalk is deteriorated beyond the minimum acceptable condition as shown on the city's website.

(c) ~~The property owner may elect, when offered by the city, to have the work performed by the city's contractor; however, the property owner's share of the reasonable cost shall either be paid prior to starting work or secured by a promissory note with interest-free monthly installments.~~ *City engineer's review.* Following the city engineer's review of each application, the property owner will be notified about the status of their application. If accepted, the city will coordinate with the property owner regarding scheduling, and the work will be managed by the city engineer. In addition to the criteria listed above, the city engineer will also consider planned major capital maintenance projects as defined by chapter 2 of this code. If, within two years of submission of the application, the property owner's sidewalk would be reconstructed as a part of a planned major capital maintenance project, the city will deny the application and will reconstruct the sidewalk during the project at no cost to the property owner.

~~**Sec. 94-37. Construction by city.**~~

~~If any property owner fails to comply with any notice served upon him in accordance with the terms of this chapter, or fails to comply with an order of the city manager, or his designee,~~

~~following a hearing, within the time specified therein, then the work order to be done in such notice may be done by the city, under the direction of the director of public works, in accordance with the procedures established in this chapter.~~

~~Sec. 94-38. Assessment for repairs; time of payment generally.~~

~~Whenever any repair or reconstruction shall be done by or under the direction of the city, as provided in section 94-37, the proportionate share of the cost, as provided in section 94-36 for such repair or reconstruction, shall be assessed against the owner of the adjacent property. Said owner shall pay to the city the proportionate share of the cost of such construction within 30 days of receiving written notice of the completion of the construction and the cost and expense. The owner's share of the cost may be paid with interest-free monthly installments secured by a promissory note.~~

Sec. 94-36. Notice of completion and payment.

(a) *Required.* Whenever any reconstruction or repair is done by or under the direction of the city, either under section 94-34 or pursuant to an accepted application for financial assistance under section 94-35, the city manager may cause a written notice of completion and payment to be served upon the property owner, or the agent of the owner. Service of the notice may be completed by registered or certified United States mail, or personal delivery of the notice.

(b) *Contents of notice.* Any notice served under the provisions of this section must contain the following information:

(1) The date that the work on the sidewalk, curb, or gutter was completed;

(2) The total cost of the project assessed against the property owner, subject to financial aid granted under section 94-35, if applicable;

(3) The property owner’s right to secure the entire balance of the assessment by a promissory note and pay in up to twelve substantially equal, interest free monthly installment payments, with the first payment due thirty days after the date of completion;

(4) If a property owner elects to pay in installment payments, the property owner may repay the entire balance of the promissory note at any time. Failure to pay any installment when due will cause the whole unpaid balance of the promissory note to become due and payable immediately at the option of the city; and

(5) If the property owner does not pay the city the entire balance of the assessment, the city may seek a lien against the property pursuant to chapter 59 of this code.

~~**Sec. 94-39. Paying unpaid installment payments.**~~

~~An owner of property, who has elected to pay by installment payments on a promissory note, may at any time pay the balance of the promissory note. Failure to pay any installment when due shall cause the whole amount of the unpaid balance to become due and payable immediately at the option of the city.~~

~~**Sec. 94-40. Manner of payment in installments.**~~

~~In the case of an election to pay in installments under this article, the installments shall be payable in not more than twelve substantially equal, interest-free monthly payments.~~

~~**Sec. 94-41. Assessment; foreclosure; recording and certification.**~~

~~In the event the assessment is not paid, collection of the assessment may be handled pursuant to the provisions of chapter 59 entitled "municipal liens."~~

Sec. 94-37~~42~~. Agent of property owner.

Nothing in this article precludes an agent of a property owner, including a property owners' association or homeowners' association to which implicated property is bound under its covenants and agreements, from acting on behalf of a property owner, but the fulfillment of duties and obligations incurred under this article is the responsibility of the property owner.

Sec. 94-38. Violations and penalties.

It shall be unlawful for any property owner to fail, neglect, or refuse to comply with the requirements of any such notice to reconstruct or repair served upon or in accordance with the provisions of this chapter, within the time specified therein, and each day's neglect or refusal to comply with the terms of said notice shall constitute a separate offense. Each offense will be punishable by a fine, not to exceed the limits established in section 1-5 of the Arvada City Code.

Secs. 94-39—94-60. Reserved.

CITY OF ARVADA

REPORT FROM CITY COUNCIL

AGENDA ITEM 12.A.

DATE: May 5, 2026

SUBJECT: Council Committee Reports

Report in Brief

City Council members are appointed to various committees and boards as set out on the attached listing. As meetings are held, individual council members will report back to the full City Council any relevant discussions and issues that occurred.

Prepared by:
Chris Koch, CCO Admin

Lauren Simpson	Arvada City Attorney Committee Arvada Municipal Court/Judicial Committee Arvada Urban Renewal Authority Arvada Visitors Center Committee E-470 Authority (Alternate) *Metro Mayors' Caucus Olde Town Business Improvement (BID)(Alternate) Urban Drainage and Flood Control District West Connect Coalition
Randy Moorman	Arvada Audit Committee Arvada Center for the Arts and Humanities Arvada Sustainability Committee CML Policy Committee Jefferson Parkway Public Highway Authority Northwest Parkway Authority (Alternate)
Shawna Ambrose	Adams County Regional Economic Partnership (ACREP) Arvada Economic Development Association Board Arvada Fire Protection District Coordinating Committee Arvada Visitors Center Committee (Alternate) Bond Oversight Committee CML Policy Committee Denver Regional Council of Governments (DRCOG) (Alternate) Jefferson County R-1 Schools Coordinating Committee

Sharon Davis	Apex Coordinating Committee Arvada Fire Protection District Coordinating Committee Arvada Municipal Court/Judicial Committee Denver Regional Council of Governments (DRCOG) E-470 Authority (Alternate) Jefferson County Community Corrections Board Jefferson Economic Development Council (JEDC) Jeffco Transportation Action & Advisory Group (JEFFTAAG)
Bob Fifer	Arvada City Attorney Committee Arvada Transportation Committee Jefferson Parkway Public Highway Authority Northwest Parkway Authority (Alternate) Smart City Advisory Committee
Michael Griffith	Adams County Regional Economic Partnership (ACREP) (Alternate) Arvada Audit Committee Arvada Chamber of Commerce Government Affairs Committee Housing Advisory Committee Jeffco Transportation Action & Advisory Group (JEFFTAAG) (Alternate) Jefferson County Community Corrections Board (Alternate) Smart City Advisory Committee West Connect Coalition (Alternate)
Rebecka Lovisone	Bond Oversight Committee Jefferson County R-1 Schools Coordinating Committee Olde Town Business Improvement (BID)

*asterisked committees are not appointed by Council

CITY OF ARVADA

REPORT TO CITY COUNCIL

AGENDA ITEM 13.A.

TO: THE HONORABLE CITY COUNCIL DATE: May 5, 2026

SUBJECT: Review of Future Workshops and Presentations

Report in Brief

The City Manager's Office maintains a list of upcoming workshops and presentations to be scheduled for City Council meetings. During City Manager Reports, at the end of City Council business meetings, City Manager Don Wick, will review with City Council the tentative schedule and make any adjustments necessary.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Rachel Morris, City Attorney	04/14/2026
Allison Scheck, Deputy City Manager	04/14/2026
Linda Haley, Deputy City Manager	04/14/2026
Don Wick, City Manager	04/14/2026

Enclosure, exhibits & attachments required to support the report

2026 CITY COUNCIL WORKSHOPS, STUDY SESSIONS, PRESENTATIONS AND RETREATS (TENTATIVE)

WORKSHOPS	Date	Lead
Wildfire Mitigation	**May 12**	CMO
W/WW/SW Rates and Fees – Why and How	**May 12**	INFRA
Harvard Bloomberg Innovation Project	**May 26**	
ADA Transition Plan Updates	**June 9**	INFRA
No meeting – CML Conference	**June 23**	
No Meeting – Appointee Evaluations	**July 14**	
W/WW/SW Rates and Fees – Financial Scenario	**July 28**	INFRA
W/WW/SW Rates and Fees – Final Scenario	**Aug 25**	INFRA
	Sept 8	
Place holder for additional W/WW/SW Rates and Fees (if needed)	**Sept 22**	INFRA
	Oct 13	
	Oct 27	
	Nov 10	
No Meeting – Holiday Week	**Nov 24**	
Infrastructure Annual Report	**Dec 8**	INFRA
No Meeting – Holiday Week	**Dec 22**	
System Development Charges	**TBD**	INFRA
End of Year City Council Strategic Plan Update	**TBD**	CMO
Building Code Update	**TBD**	CED
Parks Master Plan	**TBD**	VCN
Pavement Program	**TBD**	INFRA
PRESENTATIONS		
Arts & Culture Commission	**May 5**	VCN
STUDY SESSIONS		
Metro Districts	**March 24**	CED/Legal
City Expenditures, BID and Chamber funding	**TBD**	Finance
Waste Diversion Plan	**TBD**	INFRA
COUNCIL JOINT MEETINGS/DINNERS:		
Denver Water Board Apex Board AURA Board Arvada Center Board–Per Coop Agreement - Annually after October 1 of each year Jefferson Parkway Meeting with Jeffco and Broomfield Council Annual Retreat		